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ORIGINAL LECTURES.

FATTY HEART, WEAK HEART, PSEUDO-ANGINA PECTORIS, AND ALLIED STATES SUCCESSFULLY TREATED BY A NEW METHOD.

A Clinical Lecture,
Delivered at the Jefferson Medical College Hospital, March, 1887.

BY PROF. ROBERTS BARTHOLOW, M.D., LL.D.

GENTLEMEN: During my present clinical term, now near its end with the closing of the College session, I have called your attention to certain cases of heart disease treated by a method not conformable to the accepted canons of cardiac therapeutics. During my clinical term last year, and before, I have illustrated by example the same therapeutical conception. I purpose now to summarize my opinions and practice and illustrate these anew, by the aid of the case before us and some others that have been in my charge. I am the more inclined to utilize this opportunity before we separate for the present term, because I could not fail to see that those amongst you who had had clinical advantages, either in hospital or private practice, appeared to be somewhat sceptical of a plan of treatment differing in so many respects from that in ordinary use. This judicial attitude is in every way commendable, especially as a hasty approval of novelties is one of the evils of our time.

In the case before us we have a typical example of the most common and sometimes most important of the cardiac diseases under consideration. In the course of my remarks, to make the clinical picture more complete, I shall not hesitate to refer to other characteristic examples. Not to enlarge needlessly on points of minor importance, it will suffice to say that we have here an example of weak heart, and in consequence of the waning strength of the muscular tissue of the organ, the valves are not competent to close the orifices properly. The sounds of the heart are muffled, indistinct, and vary in time, in strength, and in volume. The pulse is arhythmical, and unequal in force and tension, and the walls of the arteries are rigid, this being especially well exhibited in the tortuosity and prominence of the temporals. There is no proper murmur. The position of the præcordial distress, and the manner in which the symptoms have developed, indicate that the right cavities have been the chief seat of the mischief, the incompetence being of the tricuspid.

If the physical signs are not distinctive, the rational signs are eminently so. Now, gentlemen, please consider this statement attentively. It has fundamental importance. The recognition of cardiac lesions is, now-a-days, so much an affair of physical diagnosis that the immense significance of the rational signs is not sufficiently—indeed, sometimes not at all—appreciated. These rational signs are the more dependable when the therapeutical diagnosis is to be decided on; for then the condition of the respiratory and circulatory organs, as manifested by these signs, constitutes the ground on which the treatment must be based.

You must not fail to understand the supreme importance of the rational signs of cardiac disease. Indeed, I may assert that any case in which the physical signs even are unequivocal, has importance in proportion to the extent and severity of the rational signs. The case before us illustrates this principle perfectly. Observe his appearance and manner. His face is pallid, lips purplish, eyes swollen, and his countenance expresses distress and anxiety. His breath is short, evidently embarrassed; he tells us that when he makes any exertion he becomes much oppressed, and that he has at times paroxysms of dyspnœa like asthma. Almost the first symptom that attracted his attention, was seizures of difficult breathing and severe præcordial distress, with pains shooting through the chest, coming on suddenly when walking on the street. These paroxysms compelled him to stop "to get breath" for a few minutes, but a short rest restored him. After a time the difficulty of breathing attended every effort at motion, and at length became constant, compelled him to sit half-erect to sleep, and prevented active exertion of any kind. The permanent difficulty of breathing was coincident with general œdema and more or less pulmonary œdema, which we find to be present now. Every now and then our patient has attacks of pseudo-angina pectoris, coming on after taking some indigestible food, in consequence of some depressing moral emotion, or in attempting exercise, especially in walking against a strong wind. These attacks have the ordinary characteristics of this state: severe pain and constriction of the chest, pain shooting into the left shoulder and arm, irregularity of pulse, feebleness, faintness, pallor, coldness of the surface, difficult breathing, and unspeakable anxiety and distress of mind. There is really no difference between the pseudo- and the true angina pectoris in respect to the complex of symptoms. The real difference consists in the extent of the damage the motor apparatus of the heart has suffered. At the outset, in many of the cases of heart disease under consideration, and for a long time in others, these attacks of pseudo-angina pectoris are almost the only indication of heart trouble, except some weakness and irregularity of action.

I must now ask you to consider briefly the mechanism of these cases. We must carefully analyze the personal and clinical history of the patients, if we would form an accurate conception of the nature of this cardiac affection. As a rule, the individuals who are thus affected lead sedentary lives, make use of a faulty diet, and suffer from the effects of some unwonted exertion or profound moral emotion; or they are, if active, and accustomed to an outdoor life, addicted to fermented

liquors or spirits; or they have been infected by some specific poison, or under the influence of some dyscrasia. A sedentary life is one of the most influential factors. The patient before us has taken hardly any exercise, indoors or outdoors, and his occupation has permitted him to indulge his natural inclination. I do not mean that our patient is to be compared to the poet Smart, celebrated by Boswell, the incomparable biographer of Johnson. Some one having mentioned that Smart owed his mental failure to a lack of exercise, Johnson characteristically opposed the suggestion. "Before his confinement," said Johnson, "Smart used for exercise to walk to the ale house, but he was *carried* back again." Now our patient did not have sufficient fondness for beer to force him to the ale house, and he has not indulged with any degree of freedom in spirits, so that the degradation of his tissues which we find, must be referred to other causes—to the need of exercise, to a deficient supply of oxygen, and to the lack of proper aliment. His diet has had an important influence over the origin and progress of the degenerative changes. He has always had a fondness for sweets, and for farinaceous foods in general, and these have constituted the principal part of his diet. Thence followed acid indigeston, intestinal fermentation ending in such a production of acid as, probably, to change the normal alkalinity of the intestinal juices to neutral—even to acid. I must ask you to note this point with care. If the intestinal juices do not effect the proper changes in the starch and sugar of the food, what happens? These substances undergo acetic and lactic fermentation, it may be because of the presence of some of the microbes of fermentation. Certain changes in the vascular system are well known to be induced by the presence of a form of lactic acid in the blood. By injecting lactic acid into the blood of animals, and by the administration of lactic acid for diabetes—a practice formerly quite popular—endocarditis and rheumatic fever have been caused. To these pathogenic influences must be added the ill-effects of an insufficient supply of oxygen.

Just consider for a moment. The imperfect primary assimilation charges the blood with crudities. The products of digestion not properly acted on by the oxygen of the air, are ultimately either deposited as mere fatty tissue, or excreted as uric acid and urates. We should not be surprised to find that these processes acting through several years, bring about the pathological changes illustrated in the history of this patient. It has happened to me to meet with various cases, in the course of my private practice, in which the same effects followed the persistent operation of the same causes. Amongst the most perfect examples of the kind coming into my hands, have been some of the judges on the bench, and I shall presently speak with some particularity of the case of an eminent jurist in the Southwest. The enforced quiet of their lives, the extremely sedentary occupation of trying causes, and other circumstances precluding exercise of a sufficient kind, combine in the case of the judges, to bring about the result.

Men of literary tastes, and pursuing mental occupations, have an instinctive fondness for sweet things. If the time were not wanting, and the occasion suitable, I could demonstrate that this fondness for sweets, which I have just said is instinctive, is based on an actual need; they are brain foods, in that they furnish the force and the constructive materials most readily available by the nervous system for work and for repair. Whether this explanation be correct or not, it yet remains that these subjects are given to the consumption of a good deal of saccharine and starchy food.

When the heart falls into a condition of weakness from the causes I have been discussing, it is readily damaged by strain. This is generally admitted and needs no further statement. It is not so well understood, however, that sudden and strong emotion—anger, grief, fear, etc.—may cause the walls of the heart to yield, when certain degenerative changes have occurred in them. It seems to me quite possible, also, that reflex disturbances—severe paroxysms of palpitation—produced by irritation elsewhere, may, also, cause yielding of the walls of the right heart.

When the circulation is carried on in the languid and inefficient way characteristic of weak heart, it follows that all the organs of the body functionate imperfectly, or, at least, slowly. The digestive juices are inadequately produced, and hence this cause of impaired digestion must be added to the others already mentioned. Poorer blood than normal, and an insufficient supply, not only lessens functional activity, but hastens retrograde change. Watery blood favors transudations, and thus the operation of mechanical causes in producing œdema is facilitated.

You will observe that I do not include the cases of heart diseases having their origin in previous attacks of acute rheumatism, nor those secondary to a neighboring pleuritis. I refer to the cases essentially chronic that have developed slowly from the middle period of life onward and out of the conditions, personal and social, which I have described. It may be well, now, to define the pathological change supposed to have taken place. Hitherto, I have indicated the mode in which weak heart is brought about, but it remains now to say something more definite about the actual state of the organ.

The condition of general weakness having occurred, the heart tissues participate to a greater or less extent in the decline of nutritional activity. It is probable that an inherited predisposition is not without influence—for, although the diseases themselves are not transmitted, a certain vulnerability of the cardiac tissues may descend. Whether this have any influence or not, the fact remains that under the conditions already mentioned the heart grows weak by fatty degeneration or fatty substitution. In other words, the muscular substance of the heart undergoes a change in which the muscular elements themselves become granular and fatty, the striæ grow cloudy, and are ultimately obliterated. Or, without being changed in structure, it is supposed, in some instances, that the muscular tissue is displaced by fatty; but it is in a high degree probable that in every case the muscular elements are more or less altered in structure. I have a strong impression that mere weakness of the cardiac muscle, especially of the right heart, is sometimes the sole change, and that under conditions involving sudden strong intravascular pressure, the muscular tissue yields, the cavity enlarges, and hence the valves become incompetent to close the orifices.

Of course, when a patient presents the evidences of atheroma of the bloodvessels, and at the same time the

symptoms of weak heart appear, it may be supposed that a chronic arteritis of the coronary artery had something to do in bringing about degenerative changes in the muscular tissue. I hold it to be probable that long-continued insufficient action of the heart also promotes the pathological alterations, by limiting the amount of blood passing through the organ in a given time. It is the right heart, more especially, which is first affected, and sometimes it may be the only part of the organ affected throughout.

Of late, current medical literature has contained some fresh statements regarding the part taken by the right heart in the development of the diseases we are now considering, I should have said, probably, *fresh pretensions*—for it has long been known that such is the fact. Twenty years ago a London physician published a most suggestive brochure, in which due importance is given to the dilatation of the right cavities as the initial change. I must again remind you that the physical signs are rather negative, and hence to learn the true condition of affairs we must carefully study the rational. Before any of the more pronounced symptoms, such as have been spoken of, present themselves, the patient has a peculiar uneasiness at or about the ensiform cartilage, usually extending somewhat to the right of the cartilage, and nearly in the position over the right side of the heart. This uneasiness which is not acute pain, is a very distressing and foreboding sensation, accompanied by rather quick, shallow, and oppressed breathing, and a weak pulse. In the severest form the pain assumes the aspect of angina pectoris, and is associated with a weak, fluttering pulse, faintness, nausea, extreme pallor, a cold sweat, etc. I have no doubt, this peculiar pain, with its accompanying symptoms, is produced by the change going on in the right heart, and hence it has grave significance, and is ominous of future calamity unless the measures instituted will remove the morbid state.

But, gentlemen, I fear I have lingered too long in this preliminary discussion. I must hasten to place before you in one view, the therapeutical measures which I have found so effective. These have been referred to in my didactic course, and have several times, during the past three years, been illustrated by appropriate cases in this clinical hall. Nevertheless, it is desirable to re-state the whole therapeutical plan in the light of my most recent experiences. One of these is described in a letter from which I will read you some sentences. If, as it has been defined, "History is philosophy teaching by example," not less is such a conception applicable to practical therapeutics, and hence cases which teach us the value of a mode of treatment are peculiarly instructive. Especially is this one instructive, for the testimony is independent, and the witness whom we examine is unprejudiced, or if affected by any bias, it was against rather than in favor of the plan—for before I was called on to prescribe the management of the case, all the various remedies to improve the condition of the heart, now most approved, were resorted to in vain, and little hope was entertained of the success of a different method. The patient, an eminent jurist, and the physician, a distinguished practitioner, belong to a city of the Southwest:

March 2, 1887.

"I am happy to inform you that Judge ——— is doing remarkably well. His condition has improved wonderfully under the influence of trinitrin—so much so that he is now able to walk a mile and ascend two flights of stairs without fatigue or oppression. The swelling has entirely disappeared, allowing him to wear a tight shoe. The appetite is fair but is restrained by the patient, who could eat much more than he does. Gain in weight over eight pounds during the last two weeks.

"I must say, however, the improvement came on slowly at first; the patient had to take fifteen drops four times daily before feeling the characteristic pain in the forehead and the flushing of the face. Since, the dose has been gradually reduced to four drops t. d. and the physiological effects of the medicine are invariably produced within a few minutes after its ingestion.

"Now, dear sir, please let me know what is to be done? Must the same dose (4 d., t. d.) be kept up? If so, how long? Or must we stop the medication for a while and resume it later on?

"Liq. potass. arsen. has been faithfully and steadily taken in the dose of two drops thrice daily before meals. If your occupations will permit you to send me further instructions as to the course to be followed, you will confer a great favor upon the judge and upon your most obliged Dr. ———"

Gentlemen, this admirably clear and well-expressed letter gives the facts of the treatment in the most compendious form.

Of course an iron-clad rule, admitting of no variations, cannot be adapted to all cases; but in general terms, the method of treatment consists in a regulated diet, systematized exercise, the use of trinitrin (nitroglycerin) and arsenic.

I should also state the negative side—why digitalis is not given; why iron is avoided, and why the digestive organs are not forced by supplying food of all kinds; but this contention may be settled the more clearly in the course of my observations on the plan under consideration.

I mention foremost among the remedies a regulated diet. You will all bear witness how persistently I have advocated a dietary adapted to the conditions present. Whether the theory I have constructed be true or not, the results have been most fortunate. I have not urged a full diet. I have not prescribed tonics so-called, and remedies to goad the sluggish digestion. The principle has consisted in giving the few foods which the patient can digest, and which can best repair damages. Under the circumstances it is not so much force-developing and heat-producing foods that the patients require, as tissue-making. The sweets, starches, and fats for the most part, are cut off from the diet, and milk, eggs, fresh meat, game, or poultry, and the succulent vegetables are given. I have explained the part which certain kinds of fermentation, stomachal and intestinal, take in some pathological processes, but the reflex effects on the heart's movements are also important. I warn you against large draughts of cold milk. Bulk becomes a cause of offense, and cold affects the heart injuriously through the solar plexus. Only a moderate quantity of hot skimmed milk is admissible, but this is a precious resource. A small amount of fresh meat—beef, mutton, chicken, broiled or roasted, excluding all the parts

charred in cooking, should be given once a day, and eggs allowed for breakfast. Bread must be eaten in moderation and it should be a day old at least. All hot breads, cakes, pastry, crackers, all gravies, sauces, condiments, pickles, fried articles, dried and preserved fruits, "canned" fruits and vegetables, salted meats, pork, bacon, ham, etc., are strictly prohibited. Such vegetables as lettuce, asparagus, celery, spinach, tomatoes, a single boiled or baked potato, if unexceptionable in quality, are advised. Stewed apple (fresh) without sugar is allowed as a vegetable, or a baked apple at the conclusion of a meal. Berries generally are advised against, unless known to agree, and then only in the fresh state, when they can be eaten quite moderately without the addition of sugar or cream. Such a simple dessert as wine or lemon jelly may be allowed if it does not give trouble.

Such in general terms is the diet of those who have still fairly good digestion; but in cases of extreme gastric disorder, an absolute milk diet may be required, or such modifications made in the dietary just given as experience may demonstrate to be necessary. The capital point is to allow the patient no aliment that can give rise to indigestion or to fermentation in the least degree. After a time the number and quality of the foods can be slowly increased as the condition of the digestive apparatus will permit, but the general plan of alimentation already sketched must be adhered to.

The next point in the treatment is exercise. Rest, but not sleep, is enjoined for a half hour to an hour after meals, and two to three hours after meals, or longer, if digestion be slow, a definite quantity of exercise is prescribed. This is not left to chance, but the amount of exertion the patient can make with safety, is ascertained, and the length of the excursion is slowly increased from day to day. Warn patients against the gymnasium. The constrained exercises taught in these institutions are a fruitful cause of heart trouble, and, hence, I do not advise them. The exercise which can be most accurately adjusted to the requirements of the case is walking, and this should be made an habitual duty. Of late, the necessity of exercise in certain forms of heart disease, has been brought forward from abroad, as a new addition to the present treatment, and, as usual, we are likely to see exercise in heart diseases carried to a ridiculous excess. Those of you who have attended my clinics here for several years past, and have been familiar with my practice, know that I have persistently urged systematized exercise as a means of increasing the strength of the heart and of improving its nutrition. I have not proposed that mountains be scaled, that somersets be turned, or that "ground and lofty tumbling" become the daily occupation. On the contrary, whilst I have advised systematic walking, regularly increased as the improvement warrants, I have sedulously warned against sudden and powerful muscular effort, and all movements that endanger the heart by overstrain. If you ask me why exercise is so important, I will tell you first, that walking increases the quantity of oxygen obtained, thus improving the blood by an addition to the amount of an essential constituent, and by burning off unnecessary materials. Exercise favors nutrition by increasing the quantity of blood received by the tissues in a given time, and this result is as true of the heart as of any other part of the body. Also, regulated exercise, by increasing the work of the heart, improves the tone and energy of the muscular elements.

I have now to call your attention to the application of drugs to the treatment of the fatty heart or weak heart —to the use of the medicinal agents, strictly speaking. In the letter, extracts from which were just now read, the most important of the remedies are named: Trinitrin, or nitroglycerin solution of *one per cent.*, and arsenic. You observe, I do not mention digitalis. I do not, at all, subscribe to the doctrine that digitalis is a "heart tonic." From my point of view this is a pernicious phrase—for, misled by this conception of its mode of action, physicians have not hesitated to administer it under all circumstances, if the heart were only weak. When the arterial tension is high, there is increased resistance to the flow of blood; and, hence, the heart must compensate by putting forth stronger efforts. Now, digitalis, given in the full doses considered proper, raises the arterial tension, and thus adds to the work of the heart, and by slowing the beat whilst the calibre of the vessels is narrowed, the amount of blood distributed is lessened. A fatal case of poisoning by digitalis, reported by Böhm, admirably demonstrates the fallacy of this "heart tonic" notion, and this is, probably, the only fatal case reported free from any source of erroneous interpretation. The victim, a girl, who had taken but one dose, died on the fifth day, suddenly, on attempting to get out of bed. Paralysis of the heart occurred, you see, when a little extra demand was made on its contractile energy. Does not this history throw an ominous light on those cases of fatty heart that die suddenly when taking digitalis as a "heart tonic?"

We have an admirable proof of the utility of physiological investigations as a means of ascertaining the therapeutic powers of remedies in the applications of nitroglycerin to the treatment of diseases; for its real value as a remedy, and the conditions in which it will prove curative, could not otherwise have been known.

The special reasons for its good effects in weak heart are the following:

It lowers the vascular tension by dilating the arterioles;

It increases the rate of the heart's movements;

It lessens that irritability of the nervous system which finds expression in spasm, especially of the nervous system of organic life.

It follows from these actions that the quantity of blood sent through the arterial system is much increased, and this increase includes, of course, the arterioles in the cardiac muscular tissue, and, hence, in this way the heart is provided with more abundant materials for its nutrition. A greater activity of movement, sustained in force, contributes to the reparative process. As the treatment, also, removes the disorders of digestion, and furnishes a more appropriate supply of aliment, the making of good blood is assured, and thus in turn all the tissues of the body gain in nutrition and the functions are rendered more active in a corresponding degree. Under no plan of treatment have I seen so rapid and thorough improvement in the condition of the weak, the anæmic, and the ill-nourished.

The capital fact which I would have you realize in all its significance is, that by this means the nutrition of

the heart is so promoted that morbid conditions of a dangerous kind are prevented, and, indeed, removed. I am firmly convinced that incompetence of the valves caused by yielding of the weakened walls of the heart, may be recovered from entirely under the influence of these remedial measures.

One of the cases amongst many others which seem to prove this statement, is that of a physician of this city, who in consequence of fatty heart with extreme weakness and irregularity in the action of the organ, was confined to bed, and incapable of movement. The diagnosis of this case had been made by one of our ablest clinicians, and I cannot, therefore, be accused of exaggeration to enhance the merit of the treatment. In this case, as in others we have had under consideration, the original cause of the cardiac derangement was a severe gastro-intestinal catarrh. At the period of maximum cardiac disorder, the stomachal distress was most extreme. The case required the most careful handling, but the final result was that the heart was restored to the normal state, the digestive organs, by a discreet graduation of the quality of the food stuffs, became able ultimately to dispose of a mixed diet, and the patient's health is so completely restored that he has returned to a daily life of most vigorous exertion, undisturbed by those irregularities of the circulation which at one time threatened early dissolution. Many similar cases have been observed, but I prefer to mention those that may be quickly referred to, in answer to the unbelief of the sceptical.

I must state with more particularity the manner of administration of trinitrin. As you have often observed here, I prescribe the one per cent. solution beginning with one drop, and adding one drop at each dose until the characteristic effects are produced. The susceptibility to its action varies greatly. The amount required ranges from one to ten drops for the largest number. When the patient feels the least degree of the action the dose is sufficient, and that quantity should be continued, the intervals being from two to six hours, according to the character of the symptoms, and the persistence of the effects. It follows that the preparation of nitroglycerin used must be such that fine gradations in the quantity administered, can be effected.[1] If the dose necessary to produce distinct physiological effects is large at the outset, it often happens that a considerable reduction can be made and yet the action be maintained. On the other hand, if a small dose suffice at first, after a time it becomes necessary to increase it a little. I am thus particular in referring to these practical matters, because I meet physicians who complain that they cannot accomplish the results claimed by others, and they, therefore, cry out "humbug!" and never suspect that the deficiency may be in themselves. Other medical sceptics and pessimists illustrate the philosophy of Mrs. Gummidge—"Everythink goes contrairy with me."

I must not fail to mention the other remedy—arsenic. I usually prescribe Fowler's solution (two to three drops three times a day); sometimes Pearson's solution of the arseniate of soda (three to six drops three times a day). This remedy plays an important part in several ways:

It removes the morbid state of the gastro-intestinal mucous membrane;

It stimulates the appetite, the primary assimilation, and thus powerfully contributes to improve the nutrition of the body;

It lessens the irritability, and the abnormal readiness of reflex action of the nervous apparatus, and imparts that influence to the cardiac and respiratory functions, which we call *tonic*. I have said nothing about iron and tonics, and all the armamentarium of supporting treatment. I have advised nothing of these remedies because they are hurtful rather than beneficial. They keep the stomach in a turmoil, interfere with the proper alimentation, and in this way retard if they do not prevent improvement. We must not lose our hold on that elementary fact—that blood is made from food and not from medicine, and that other basic truth, that the construction and repair of the tissues can only be effected by good blood.

Above all, I have surely taught in vain if I have not convinced you of the value of simplicity in therapeutics. Not less in medicine than in philosophy, are necessary—"clear thinking and straight seeing." Without these all our efforts are blind and aimless.

[1] At the present time excellent tablets of trinitrin are made. The writer can speak in praise, especially of Wyeth's, which are so made that the dose can be varied with the utmost nicety.

ORIGINAL ARTICLES.

A CASE OF PHTHISIS TREATED FOR EIGHT WEEKS BY RECTAL INJECTIONS OF GAS.

WITH NOTES AND EXPERIMENTS.

By E. L. TRUDEAU, M.D.,
of Saranac Lake, N. Y.

Dr. Bergeon's purposed plan of treatment for diseases of the lungs is put forward as embodying the application of scientific data to clinical medicine, and is so novel a departure, in the field of pulmonary therapeutics, as to demand general attention.

The claims made for the method, and which are still "sub judice," are, first, that by its use antiseptic substances may be conveyed through the lungs; secondly, that the gas injections, on account of the germicidal influence which they exercise on the morbid processes going on in those organs, are a specific in incipient phthisis as well as in acute miliary tuberculosis (which is claimed to have been cured in six weeks by their use) and are beneficial to a greater or less degree in all forms of consumption, bronchitis, and asthma at any stage. As the validity of these claims can only be settled by a comparison of the results noted by many observers, I venture to put the accompanying case on record, with a few experiments and notes made at the time bearing on the germicidal value of the gas.

J. R., æt. nineteen, American, clerk, an only son, mother still living and in good health, father died of apoplexy. Patient had been in good health until August, 1886, when he began to cough; soon afterward he had a hemorrhage, and has been running down steadily ever since. Physical examination March 26, 1887, revealed dulness on percussion over upper two-thirds of right lung, with bronchial breathing under the right clavicle accompanied by many coarse and fine râles. In lower portion of lung

coarse crackling râles were heard accompanied by fair resonance. At left apex nothing but slight crepitation was made out. Temperature, 8 P.M., 100½°; pulse 120; respiration 28. Patient had lost ten pounds, had occasionally night-sweats, a severe cough, profuse expectoration, breathlessness, and loss of appetite.

Treatment was begun Feb. 4th, and continued without intermission until April 2d, two injections of six litres (six and one-third quarts) of gas each, being given daily. This was soon increased to seven litres at a sitting (fourteen litres daily) and this amount was made use of until the treatment had been continued eight weeks. Dr. Bergeon's directions were minutely followed in every respect, and the freshly made carbonic acid gas passed either through Eaux-Bonnes water, bisulphuret of carbon vapor, or Richfield Springs water.

The patient's vital signs were daily noted, and tabulated as follows:

TABLE OF SYMPTOMS.

	Average of pulse, 7 observations at 8 P. M.	Average of temperature 7 observations at 8 P. M.	Average of respiration, 7 observations at 8 P. M.	Expectoration, 24 hours.	Weight.	Sweats.	Physical signs at beginning of treatment.	
							Right lung.	Left lung.
Beginning of treatment	110	100⅗°	27	7 oz. contains bacilli.	148½	Occasionally slight.	Dulness on percussion over upper two-thirds. Bronchial breathing under clavicle, with many fine and coarse râles. In lower portion of lung coarse râles; weakness of vesicular murmur.	No dulness. Some fine râles in suprascapular region.
End of 1st week . .	99	99½	26	×	150½	×		
End of 2d week . .	91	98½	26	.....	154½	.....		
End of 3d week . .	98	99	28	.....	155	.....		
End of 4th week . .	96	98⅕	25	.....	157	.....		
							At end of treatment.	
End of 5th week . .	98	98⅖	24	.....	157	.....	Dulness same over upper two-thirds. Bronchial breathing under clavicle same; a few fine râles only. *No râles below* x; weak vesicular murmur.	No dulness. No râles, except on coughing, and then difficult of detection.
End of 6th week . .	98	98⅖	25	.....	157	.....		
End of 7th week . .	94	98½	23	.....	157	.....		
End of 8th week . .	98	98⅖	26	4 ounces + contains bacilli.	157	None.		
On 2d day, after discontinuing treatment, temperature . . .	.....	100½						

Though noted at this early stage of the case, these results are, on the whole, encouraging, and indicate that the gas exercised a beneficial influence on the suppurative processes going on in the lungs of this patient. The temperature during the last three weeks of treatment, never once reached 99° F., but rose at once on discontinuing the injections for a few days. This would indicate the necessity of continuing treatment for long periods of time, and even after all the symptoms of septic poisoning have disappeared. The tubercle bacilli, however, remained present in the expectoration, and the pulse and respiration fell but little. The physical signs showed no decrease in the area of consolidation, though a very marked diminution in the moist sounds was noted. At the left apex these almost entirely disappeared.

Satisfactory as are these results, it must be borne in mind that improvement quite as marked frequently occurs in this disease without any specific treatment whatever. The procedure, though grotesque and tedious to patient and nurse, apparently produces no disturbance of any of the functions of the body, and, provided the amount of sulphuretted hydrogen introduced is moderate, appears free from danger.

The Eaux-Bonnes water, the bisulphuret of carbon vapor, and the Richfield Springs water, were each made use of in turn. The Eaux-Bonnes water, to which Dr. Bergeon gives the preference, was soon discarded, on account of the very small quantity of sulphuretted hydrogen which remains in the bottles after so long a transportation, as shown by chemical tests. The bisulphuret of carbon vapor produced headache and some intestinal irritation, and was for these reasons discarded, after a few injections. The Richfield water was obtained fresh from the springs, having been bottled a few days previous to use, and was found loaded with sulphuretted hydrogen, containing fully seven per cent. of the gas. It was admirably borne by the intestine, and its rapid absorption was in striking contrast to the tedious manner in which the bisulphuret of carbon vapor was disposed of.

I could not myself detect the odor of the gas in the breath of the patient, and I failed to obtain any appreciable precipitate of sulphide of lead by directing him to blow for ten minutes at a time through a solution of the acetate, immediately after taking the enema.

Sulphurous acid and sulphuretted hydrogen have already been used as germicides in phthisis. Vallin[1] found sulphurous acid efficient in rendering innocuous tubercular products, and Germain Sée[2] considers

[1] Académie de Méd. Séance du 16 Janvier, 1883.
[2] G. Sée, Phthisie Bacillaire des Poumons, Paris, 1884.

it superior to carbolic and salicylic acids in destroying the bacilli of the disease.

Sulphuretted hydrogen has been tried by Cantani in the form of inhalations in phthisis, and this observer has claimed good results from their use, but its antiseptic value is far less than sulphurous acid. The possibility of its oxidation while passing through the body, whereby its efficiency may be increased, should be kept in view.

As the germicidal value of the gas as it enters the body seems so far to have been assumed rather than demonstrated, the following experiments bearing on this point were instituted.

Experiments.—A pure culture of the tubercle bacillus was mixed with two cubic centimetres of sterilized water in sufficient quantity to render the liquid quite opaque, and through this eight litres of gas precisely as taken by the patient were slowly passed by being directed to the bottom of the test-tube through a finely drawn glass pipette. This quantity of carbonic acid is the largest amount that can be used at one treatment, and it was forced through an entire bottle of Eaux Bonnes mineral water moderately heated in order to insure its being thoroughly loaded with the sulphuretted hydrogen. The quantity of sterilized water in which the germs were suspended was so small that as the gas slowly bubbled up through it, they must of necessity have been brought in contact with the entire quantity of the vapor used.

After the operation had been completed, the bacilli were planted in six tubes of coagulated blood serum, and together with two control tubes containing plants made from the same germs prior to the experiment, were all put in the thermostat together.

The remainder of the liquid, containing the microbes which had been subjected to the action of the gas, was taken up in a Koch's inoculating syringe, and injected in the right pleural cavity of two healthy rabbits. Precisely the same experiment was repeated two days later, except that the Richfield water was substituted for the Eaux Bonnes.

In two weeks fifteen out of the sixteen tubes showed an abundant growth of tubercle bacilli.

The four rabbits died on the twenty-sixth, twenty-eighth, thirty-first, and thirty-second days, respectively, and all showed small, cheesy masses in the injected lung, and miliary tubercles scattered through the spleen, liver, pleura, and peritoneum.

The rather unusal rapidity with which death was produced in these animals was no doubt due to the large number of bacilli injected. As the tubercle bacillus, however, is a spore-forming organism, and for this reason most difficult to destroy, and as other bacteria play an important part in the destructive and septic processes of advanced phthisis, the effect of the gas on some of these germs was tested.

The bacterium of blue pus and the staphylococcus pyogenes aureus, were selected for this experiment, as they are both intimately connected with the lesions found in the lungs of consumptive patients. These organisms form no spores, multiply by fission, and are, therefore, more susceptible to the action of chemical substances than the tubercle bacillus.

Pure cultures of the bacterium of blue pus, and the staphylococcus pyogenes aureus were each mixed in two separate tubes, with 2 c.c. sterilized water, and through each tube of the fluid, made appreciably turbid by the microbes, 8 litres of the gas were passed exactly as in the foregoing experiment, the Richfield spring water being chosen. Ten of the twelve agar tubes, planted with the organisms thus treated, showed an abundant growth of both varieties of bacteria in less than three days.

The gas, therefore, as it enters the body appears to have no germicidal value whatever.

A satisfactory conclusion as to the real therapeutic merit of this method, cannot necessarily be reached for many months to come, but so far as the evidence procured by its application to one case for so short a time may be of value, it would seem that rectal injections of gas by Bergeon's method have a beneficial influence on the suppurative processes of phthisis. The method seems deserving of a m ost thorough and extended investigation, and *though the treatment may prove in the future to be a useful therapeutic measure, a consideration of the facts here presented does not in the least warrant the assumption that a specific for tuberculosis has been discovered.*

A NEW COLOR-TEST (ROUX'S) FOR THE DETECTION OF THE GONOCOCCUS;

WITH REMARKS ON ITS PRACTICAL IMPORTANCE.

By EDMUND C. WENDT, M.D.,
of New York.

For the past three years the relation of Neisser's gonococci to gonorrhœa has been engaging my attention. My studies were pursued with the view mainly of adding to our clinical knowledge of the subject, and were carried on conjointly with Dr. Charles W. Allen, of New York. I was early struck with the difficulty, if not the impossibility, of differentiating the microbes of blennorrhœa from similar diplococci.

Like other observers, I was unable to confirm Neisser's statement regarding the characteristic appearance of the specific micrococci of gonorrhœa. And, indeed, it is now generally admitted by those most competent to judge, that the gonococcus is not sufficiently well characterized by its morphological attributes, to admit of our establishing its identity. Again, while it is quite true that, in most cases, the peculiar intracellular grouping of the gonococci will render a diagnosis highly probable, nevertheless, I cannot allow to go unchallenged the claim of Bumm, to the effect that this constitutes a truly pathognomonic sign. Among about one thousand specimens, of various secretions examined, I have several times observed this alleged pathognomonic arrangement of microbes within the pus-corpuscles, although gonorrhœa was quite out of the question.

It was not until I had become thoroughly acquainted with Roux's color-test for gonococci, that I felt confident that blennorrhœa could be diagnosticated with certainty, by the aid of the microscope. The method of Roux was made public at a meeting of the Académie des Sciences, held November 8,

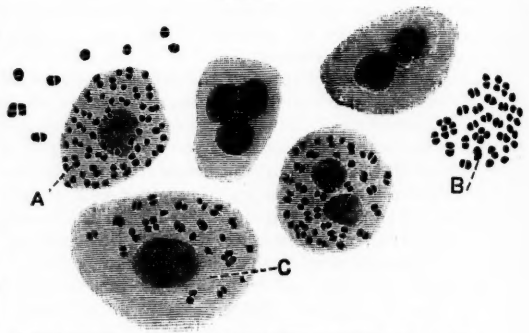
1886. After a considerable number of experiments, I am able to state my belief that it is a reliable one. The method itself is based on the peculiarity of gonococci to hold aniline colors only very loosely, and to become speedily decolorized when subjected to the action of ordinary reagents for that purpose. Although Bumm has found and described no less than five different kinds of diplococci,[1] it does not appear that any but the true gonococci retain aniline colors so poorly as to almost immediately fade from view in the presence of decolorizing fluids. On the contrary, by employing the method of Gram, the ordinary bacteria, as is well known, appear deeply stained. But in a given specimen stained after the manner of Gram, all gonococci invariably disappear, even more quickly than do the anatomical elements thereof.

It appears that Gram's solution of iodine and iodide of potash, so far from fixing the aniline color upon gonococci, as it does upon the other schizomycetes, causes them to give up the stain previously imbibed.

I will now describe, step by step, the method of procedure which I have found to yield the best results, and which differs in no essential respects at least, from that advocated by Roux, to whom is due the credit of having first applied it for purposes of differential diagnosis. The material to be examined is spread in a thin film upon a glass slide by drawing a second slide over it. It is then allowed to dry at the ordinary temperature of the room.[2] The specimen is next stained by one or two drops of a saturated solution of methyl-violet in aniline water. Twenty to thirty seconds are amply sufficient to accomplish this purpose. After washing in distilled water, and placing a cover glass on the slide, it is ready for the first examination. The gonococci are found deeply stained, precisely like all the other microörganisms present in the specimen. The cover-slip is now removed, Gram's solution of iodine in iodide of potassium (iodine 1 part, iodide of potassium 2 parts, distilled water 300 parts) is poured upon the slide and allowed to act for three minutes. After again washing in water, absolute alcohol is poured over the specimen and quickly removed by a gentle stream of water. The cover-slip is now replaced and the specimen submitted to a second examination. This procedure brings out ordinary bacteria in so strikingly beautiful a manner, that it has been called by Friedländer "nearly ideal." But while this is true of microbes in general, the gonococci are found to have disappeared.

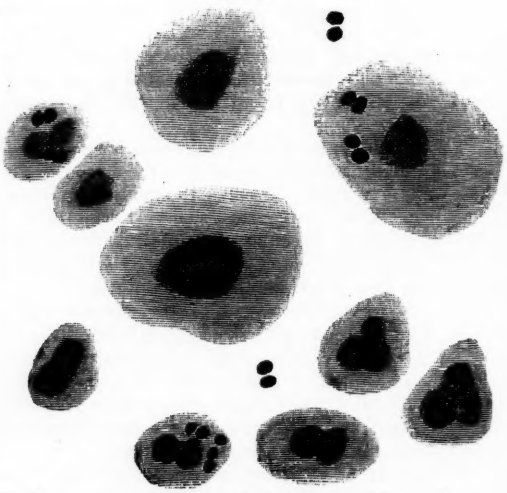
In typical gonorrhœal pus from the male urethra the gonococci exist in such abundance as to overshadow by their presence all other microörganisms. While the intracellular grouping of the microbes is certainly characteristic, that sign alone should not be relied upon in making a positive diagnosis. But if, in addition, the bacteria disappear on the application of the above method, it is safe to assume the presence of blennorrhœa. If, on the other hand, these microörganisms persist, the inference is justifiable that they are not gonococci, even though they should occur in groups within the cells.

FIG. 1.



Usual appearance of the discharge in acute gonorrhœa. A. Intracellular group of gonococci (pathognomonic according to Bumm). B. Extracellular group of gonococci. C. Urethral epithelium containing gonococci. Schematic.

FIG. 2.



Usual appearance of discharge in "nearly cured" gonorrhœa. Schematic.

I have not found it necessary to employ eosine as a contrast-stain, as recommended by Roux. But there is no harm in its employment, and it facilitates focussing in those cases where only gonococci exist in a specimen. The eosine always causes the anatomical elements to reappear with a faint rosy hue, the gonococci also assuming a very faint color. The other bacteria remain purple, and thus a double coloration appears. But it is necessary to have some experience with the use of eosine, or the specimen will be spoiled. I employ an alcoholic solution,

[1] These diplococci were obtained from various sources, such as ordinary atmospheric air, the preputial smegma, the discharge in acute vaginitis of children, etc. They are all accurately described in the second edition of Bumm's work, entitled "Der Mikro-Organismus der Gonorrhoischen Schleimhaut Erkrankungen, Gonococcus Neisser," Wiesbaden, 1877.

[2] I have come to discard the use of heat for drying specimens of gonococci, since their shape is better preserved without passing the glass-slide through the flame.

and allow it to act about one minute. On the whole, I do not regard it as necessary for purposes of diagnosis.

If the experience of others will be found to substantiate, as Dr. Allen's and my own has done, the claim to absolute accuracy made for his method by Roux, then I doubt not a decided step in advance will have been taken. Those familiar with bacteriological methods know only too well how difficult it is to obtain the supreme proof of the etiological significance of the gonococcus by the implantation of pure cultures. Thus so able and competent an observer as Sternberg was compelled recently to admit (The Medical News, February 26, 1887) that he had mistaken a non-pathogenic culture of diplococci for one of the true gonococcus, and that, therefore, the negative outcome of his inoculation experiments was devoid of significance.[1]

Bumm himself only succeeded after many futile efforts, and according to him the gonococcus grows well, outside of the body, only upon human blood-serum. Moreover, in our country it would be difficult to find healthy men or women who would submit to having their sexual organs tampered with to the extent of artificially producing, or attempting to produce, a typical gonorrhœa. In Germany there appears to be no lack of "human material" for the experiments of the enterprising mycologist. As gonorrhœa cannot be produced in animals, we must either depend upon microscopical evidence for purposes of diagnosis, or go without. It is for these reasons that the new color-test described above will be welcomed by the practitioner as placing within his reach a ready means of deciding positively as to the true nature of a discharge.

A word of caution is perhaps necessary here. Granting the absolute reliability of Roux's method as applied to intracellular groups of diplococci, it does not follow that the presence, in a suspected discharge, of the microbes of gonorrhœa must result in a communication of disease under favoring conditions. It does prove the infective capacity of a secretion just as positively as the absence of the gonococci proves the opposite. But that is all. It is a well-known clinical fact that exposure to infection does not always result in an attack of the particular disease in question. This is eminently true of gonorrhœa. I have observed cases of married men whose urethral discharges always showed gonococci, but whose wives remained healthy and gave birth to children showing no sign of ophthalmic blennorrhœa.

Bnt it is also true that men with a minimum of discharge containing gonococci have communicated the disease to others. I have never known a case in which infection resulted in the absence of gonococci. And again I have seen a few cases in which all the clinical symptoms of gonorrhœa were present, but in which the abundant creamy discharge contained no gonorrhœal microbes. In these cases recovery resulted in from two to six days, by letting things alone and ordering a placebo. These are doubtless the cases that appear in literature as "cured" by some "original" or novel plan of treatment. A systematic microscopic examination of all suspected secretions will soon dispel all such illusions. True gonorrhœa is never "cured" in less than four weeks. In many cases the process is of much longer duration. At least this has been my experience with the disease. But true gonorrhœa is not a benign urethral catarrh, it is a virulent inflammation due to bacterial invasion. This should be generally recognized by the profession, for there still prevails in our ranks much looseness of conception regarding the true nature of the disease, coupled with a disposition to shirk the responsibility which modern methods of bacterioscopy have entailed upon every earnest, honest, and well-meaning practitioner.

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[1] See Sternberg's articles in The Medical News, of January 20, 1883, and October 18, 1884.

REPORT OF A CASE OF IMPERFORATE HYMEN,

WITH SEPTICÆMIA BEFORE AND AFTER THE OPERATION FOR ITS RELIEF.[1]

By C. O'DONOVAN, Jr., M.D.,
of Baltimore, Md.

In reporting this case, from the service of Prof. Wm. L. Howard at the Hospital for the Women of Maryland, I wish to call the attention of the Society to the pulse and temperature range of the patient, rather than to the operation itself for the removal of the imperforate hymen, as it shows that for an indefinite time before and for a period of more than six weeks after, this girl suffered from the septic influence of chronic blood-poisoning; and that it was only by very careful nursing combined with the assiduous administration of remedies to meet the recurring elevation of temperature and frequency of pulse, that she eventually emerged from her dangerous situation. This will become more apparent as I read the history of the case.

C. S., aged fifteen, white, entered the Hospital for the Women of Maryland, on November 19, 1886. She came from Harford Co., Maryland; and had been seen by physicians before leaving home, who had correctly made the diagnosis of imperforate hymen with retained menstrual blood. She was very pale and anæmic in appearance, miserably thin, and showed no external evidence of the development usual at puberty. She was extremely nervous and irritable, so much so that no satisfactory examination could be made until chloroform had been administered. Her temperature was not taken before the operation, but her pulse was always frequent, varying between 96 and 120, and changing markedly during any prolonged observation, due most likely to her nervous irritability. She had never seen any external sign of menstruation, but at irregular intervals, of late more frequent and more regular, she had felt severe pains in her abdomen and back, at which times her condition would become much more serious. When she was thoroughly relaxed by chloroform, a tense cystic tumor could be felt above the

[1] Read before the Baltimore Gynecological and Obstetrical Society.

symphysis pubis, reaching probably three inches above the symphysis, and easily identified as the uterus, distended by fluid. The external genitals were perfect, but the hymen formed at the mouth of the vagina an absolute barrier to the egress of menstrual blood. The examining finger in the rectum appreciated the presence in the vagina of sufficient fluid to distend it to its fullest capacity, so much so that the uterus was pushed up completely out of reach.

On November 22d, following the method of Emmet, Dr. Howard punctured the vaginal cyst and let out a pint or more of thick chocolate-colored fluid, after which he washed out the vagina thoroughly with hot carbolized water, until the water returned clear. He then cut out with a pair of curved scissors the remnants of the hymen, so that there could be no impediment to the flow. After the operation it was noticed that the lump formed by the distended uterus was still quite apparent above the symphysis, though it seemed not so high in the abdomen. The finger introduced into the vagina could not make out the cervix, on account of the greatly thickened condition of the vaginal walls, which seemed, from the boggy feel they imparted, to be infiltrated with serum. On this account the cavity of the uterus could not be explored.

The treatment after the operation consisted only of rest in bed, and a copious vaginal douche morning and night of hot carbolized water. Her pulse continued frequent, from 100 to 110; but otherwise she progressed satisfactorily until November 26th, four days after the operation, when she complained about midday of a slight chill. At 1 P.M., her pulse was 138, her temperature 98.6°. She was ordered quiniæ sulph. gr. iij every three hours; but at 8.30 P.M. her pulse was 108, her temperature 100°. From this she developed quite a severe attack of septicæmia, with the following daily range of pulse and temperature:

		Pulse.	Temperature.
November	27, 12.05 P. M.	142	100 °
"	27, 9. "	144	100.4
"	28, 9. "	160	100.6
"	29, 7. "	138	100
"	30, 10.30 A. M.	108	99.6
"	30, 9. P. M.	132	102.4
December	1, 2.30 "	162	102.6
"	1, 9. "	120	100.4
"	2, 11. A. M.	135	99 4
"	2, 9. P. M.	125	101.4
"	3, 1. "	125	99
"	4, 11. A. M.	125	99.4
"	5, 2. P. M.	125	100
"	6, 1. "	125	99.5
"	7, 9. "	125	101

This will show the extent of her attack and its subsidence, much more gradual than appears from the table, for at the last rate of pulse and temperature she continued for about three weeks longer, by which time she had gathered sufficient strength to be able to be up and about the Hospital. Her treatment during the elevation of temperature was moderate doses of quinine and of syr. ferri, with forced feeding, principally milk, and some alcoholic stimulation. The vaginal douche was continued throughout convalescence. When her condition was worst, with a pulse of 162 and temperature of 102.6°, on December 1st, the advisability of making an abdominal incision and washing out the pelvic cavity was considered, but postponed; meanwhile her symptoms became much more favorable, rendering operation unnecessary.

On December 22d she was thoroughly examined, and the cervix could readily be felt, but the vaginal walls were still so thick and infiltrated that little definite could be said of the condition of the pelvic organs. Dr. Howard announced his belief that she had a retrouterine hæmatocele, which had existed for an indefinite time, and that her septic symptoms arose from the absorption of material from this mass. This was conjectural, for nothing definite could be felt. She was ordered two of Blaud's pills after each meal, and gradually improved. On January 7, 1887, syr. ferri gtt. xv. t. i. d. was substituted. The cervix could then be felt, high up in the vagina, and soft. The anterior and posterior vaginal walls continued greatly thickened, and infiltrated with serum. Strange to say, she has not menstruated since the operation, although her general health has greatly improved, and her appearance is vastly better.

REMOVAL OF AN ENORMOUS CALCULUS FROM THE PELVIS OF THE KIDNEY BY LUMBAR INCISION, WITH REMARKS.[1]

BY FRANCIS J. SHEPHERD, M.D.,
PROFESSOR OF ANATOMY IN MCGILL UNIVERSITY, SURGEON TO THE MONTREAL GENERAL HOSPITAL.

THE following case is of interest not only on account of the large size of the stone removed, but also because the question of the comparative merits of nephrotomy and nephrectomy is raised in such conditions of the kidney as existed in this case. The patient was sent to me by Dr. J. R. Johnston, of Spring Valley, Minnesota, with a letter stating he suspected the man was suffering from stone in the kidney.

The history of the case and condition on entrance I quote from the Hospital Report:

"W. C., aged twenty-six, was admitted into the Montreal General Hospital on the 18th of October, 1886, with a history of long-continued pain in the left lumbar region and pus in the urine.

"*History.*—Family and personal history good. Seven years ago he first noticed that small quantities of blood were passed in the urine at the end of micturition; four years ago blood was mixed with the urine, giving it a smoky appearance. Has seen no blood in his urine for two years. During the last seven years he has been troubled with continuous pain, not always very severe, in the left loin, occasionally radiating downward to the crest of the ilium. He occasionally has periods of very severe pain lasting for some two or three weeks, after which he is comparatively well; of late years these periods of pain have not been so frequent, and when they do occur the pain is of a sickening character and causes morning vomiting. Sudden movement, as sneezing and coughing, brings on an attack of pain. Five

[1] Read before the Montreal Medico-Chirurgical Society, March 25, 1887.

years ago first noticed a whitish deposit in urine; up to a few months ago this was quite small in amount, and was passed with the morning urine. No history of renal colic.

"*Present condition.*—Is a fairly well nourished young man, of medium size, and with an anxious expression of countenance; complains of dull, aching pain in left lumbar region, and immediately below the last rib, in the axillary line, is a very tender spot the size of a twenty-five cent piece. He says the pain radiates from this point. Urine has a specific gravity of 1.015, and contains 15–25 per cent. of pus. Some days there is only a trace of pus. At other times there is as much as 25 per cent. Urea, 7½ grains to an ounce. Amount of urine daily excreted, 40–50 ounces.

"By external examination no tumor or fulness can be detected on the left side."

On the 28th of October he was put under ether and the abdomen thoroughly examined by both Dr. George Ross and myself, but no tumor could be made out. The left loin was carefully explored with the long needle of an aspirator, but failed to reach either pus or a calculus. It was concluded from the history of the case and the symptoms that a stone probably existed in the pelvis of the left kidney; so, after consultation with my colleagues, I decided to cut down on the left kidney by lumbar incision, and explore it.

Operation.—October 30th, the patient being under ether, was placed on his right side, with a hard pillow under the right lumbar region, and a horizontal incision was made close below the last rib of the left side, commencing at the edge of the erector spinæ muscles, and extending downward and forward for some five to six inches. After dividing the muscles of the abdomen, the quadratus lumborum was reached, the lumbar fascia divided, and the kidney searched for; the lower end was felt at a considerable depth, in fact, it could be barely reached with the fore and middle fingers of the right hand, so the opening in the loin was enlarged by an incision at right angles to the first, making the wound a crucial one. A long needle was introduced into the kidney and a calculus was immediately felt. The kidney being steadied by pressure from without, I made an incision down to the stone in the long axis of the organ, of some three inches. Through this incision an immense stone could be felt with the finger, but owing to its great fixity and large size it could not be dislodged. Whilst endeavoring to remove the stone, I accidentally ruptured a large artery, which ran to the lower end of the kidney, and was no doubt a supernumerary renal; the hemorrhage was profuse, and I immediately introduced one hand into the wound, and so prevented further bleeding, whilst with the other I managed to catch the bleeding vessel with a pair of long artery forceps.

The stone proved too large to be grasped by a lithotrite, and too hard to be broken by a cutting forceps. I attempted to break it with a chisel and mallet, but failed because of the difficulty of getting fixation of the kidney. The incision in the kidney was now further enlarged, and the stone gradually separated from the kidney tissue with the finger; even now, owing to the prolongations into the calices, the stone could not be removed. With considerable difficulty I managed to free the lower end of the stone which blocked the entrance of the ureter, and lifting it up, requested Dr. James Bell to grasp it with a pair of large lithotomy forceps; this was done, and the stone was brought away after the expenditure of considerable force. On examining the removed stone, it was seen that there were a couple of projections on it, one of which appeared to have been freshly broken off; so the hand was again introduced into the wound and a large fragment removed from a calyx; other smaller pieces were also removed. As the patient had been already an hour on the table, and was becoming weak from shock and loss of blood, no further exploration took place.

During the operation not a single drop of pus was seen; none apparently surrounded the stone, which was quite closely embraced by the surrounding kidney substance. So far as naked eye appearances went, the part of the kidney seen was perfectly healthy.

At one time I thought it would be necessary to remove the kidney, as it seemed impossible to remove the stone without it, but the very healthy appearance of the portion of the organ seen (the lower end), and the absence of pus, determined me to persevere, and, if possible, remove the stone and leave the kidney till the condition of the other could be ascertained. At no time during the operation could the kidney be brought to the surface,

Side view, natural size.

and the operation had to be performed by feeling more than by sight.

After washing out the wound thoroughly with a 1 : 2000 solution of corrosive sublimate, and introducing a large drainage tube, the wound was brought together with silk sutures and dressed with sublimate jute pads. At the close of the operation the

patient was in a fairly good condition, and did not show much evidence of shock; and, although he had lost a considerable amount of blood, his pulse was full and strong, and not more than 80.

The weight of the removed stone and fragments immediately after the operation was 4 oz. 7 drachms. It measured 3½ inches in length, and 9 inches in circumference, and consisted entirely of triple phosphate.

After the operation, which took place at 2 P.M., the patient did not pass any urine till noon next day, when he voided 7½ oz. As there had been a great deal of oozing, the wound was dressed next day. Temperature 101°. Pulse 120. He still had vomiting from the ether.

Nov. 1. He passed 32 oz. of urine which was free from pus and blood.

For some time the patient progressed slowly toward recovery; his temperature ranged between 98° and 100°, and the amount of urine from 25 oz. to 50 oz. daily. The wound, which was not very sweet, and from which came large quantities of urine, gradually healed, and the tube was removed in the early part of December. He now began to have high and irregular temperature, with some sweating; from the 10th to the 25th of December his temperature ranged from 98° to 102°, and for several days after reached, in the afternoon, as high as 104°–105°. Fearing that some collection of pus was forming about the kidney, I reopened the wound, introduced my fingers, and explored the pelvis of the kidney, but without result, except that a few flakes of calcareous matter were brought away. It was now decided to cut down and remove the kidney, but the patient quite unexpectedly took a turn for the better, and improved so much that, in the early part of January, he was able to go about the ward, enjoy his meals, and gain flesh. The sinus in his right loin never healed, but continued to discharge large quantities of urine with a small amount of pus. At this time my service at the hospital having expired, I only saw my patient occasionally. His temperature was for several days quite normal, and then for a time would range as high as 101°. The amount of urine varied from 30 oz. to 40 oz. daily. I saw him early in February, going about, and apparently in fair condition. On the 10th of February he suddenly became jaundiced, his temperature rose to 102°, and he had severe sweatings. I saw him, and examined his side carefully, but could discover no evidence of any collection of pus about the wound, and the amount of urine reached 40 oz. daily. The fistulous opening in his side discharged urine freely, and a very small amount of pus stained the dressings. He gradually became worse, and died comatose on the 14th of February, three and a half months after the operation.

The autopsy was performed by Dr. Wyatt Johnston, pathologist to the hospital, and the following is taken from his report: "Body jaundiced. In left lumbar region a depressed cicatrix about two inches long is seen with a sinus toward the centre, from which fetid pus can be squeezed out. On opening the abdomen a large oval mass is seen in left lumbar and extending up into the left hypochondriac region. This mass has a quantity of fibrous exudation surrounding it and is very difficult to remove, being firmly attached to the lumbar muscles, spleen, and vault of the diaphragm. The retro-peritoneal glands are acutely swollen, but show no signs of suppuration. The aorta and vena cava are not directly involved in the mass and can be readily dissected off. Near the inferior extremity of kidney, two inches above the crest of the ilium, a small artery one and a half inches long running directly from aorta to kidney, is seen; it is obliterated, apparently from a ligature. The fatty capsule of the kidney is densely infiltrated with fibrous tissue and cannot be removed without tearing the kidney substance; the left kidney itself is greatly enlarged and forms a fluctuating mass weighing nearly 1000 grammes. On opening the pelvis a little fetid pus escapes and the sinus in the loin is seen to open into it. On palpation a small calculus mass can be felt toward the cortex in one of the calices of the kidney, the calculus is the size of a hazelnut and appears to be broken off in one spot. It is enclosed in a small pocket of pus. The ureter immediately below the pelvis of the kidney is completely obstructed and its walls are much thickened. On incising the kidney along its convexity it is found to consist in the upper portion of a series of large communicating sacs containing over ten ounces of fetid pus. These cavities do not communicate with the sinus or the pelvis of the kidney, but are completely shut off from the rest of the kidney by thick fibrous walls, showing that the disease is of long standing. Within these sacs lie five or six irregular-branched calculi, varying in size from a bean to a walnut. The lower fourth of the kidney contains a considerable quantity of healthy renal structure. Bladder and lower part of ureter normal. Right kidney double normal size and looks to be perfectly healthy. Liver shows numerous enlarged lymph glands lying beside the bile ducts, but bile can be easily expressed. Other organs healthy."

There is not the slightest doubt that this patient died of septicæmia due to the fetid abscesses in the upper end of the kidney. These could not be diagnosticated by external manipulation, and from the fact that the part of the kidney seen at the operation was healthy in appearance and contained no pus, the condition of its upper end was not suspected.

So far as the operation itself went, it was successful, but one lesson may be learned from this case, viz.: that with a large stone in the pelvis it is almost impossible to have a kidney which has not undergone grave changes, and its thorough exploration by incision is indicated. Had there been pus around the stone and the kidney tissue not looked so healthy, I should have attempted to remove the kidney, but I had in my mind a specimen in the Museum of the Medical Faculty of McGill University, where the pelvis of each kidney, in a man, is filled by an enormous stone whilst the surrounding kidney structure is comparatively healthy and where there was not a drop of pus[1] or the sign of disor-

[1] This case is reported by Dr. J. A. McDonald in vol. xii. of Canada Medical and Surgical Journal.

ganization. In my case, however, although in the immediate neighborhood of the large calculus the kidney was healthy, yet the greater portion was composed of pus cavities containing stones unconnected with that in the pelvis.

The kidney was placed so deeply and situated so high up that, with even the very extensive lumbar incision which was made, it could not be properly explored, and I very much doubt if it could have been successfully removed by the loin. Its removal, owing to the numerous adhesions to important organs and its location, would have been a matter of serious difficulty, if not an impossibility, even by abdominal incision, for at the autopsy by the combined abdominal and lumbar incision it was only by cutting freely the surrounding parts that its excision was accomplished.

In such a case incising the kidney in every part, evacuating the pus, and removing the calculi would be the proper procedure. Diseased kidneys which enlarge downward are much easier to remove by lumbar and also abdominal incision, than those which enlarge upward and are wholly under cover of the ribs.

There is another point about this case which is worthy of notice and it is this: When a kidney is highly placed it may be enlarged so as to form a considerably sized tumor which cannot be detected by the most careful palpation even when the patient is placed under ether. The failure to find the stone by needle exploration, before the operation, was due to the same cause—the high position of the tumor and its great depth.

In connection with this case I might mention one reported by Prof. Guyon, of Paris,[1] which is very similar to the one narrated above. In Guyon's case, however, a distinct tumor could be felt externally. After cutting down on the tumor and incising it he found the pelvis of the kidney completely filled by an enormous stone with processes extending into the calices, these processes were cut off with forceps and the large calculus extracted with difficulty; after the removal of the smaller pieces, the pelvis of the kidney was explored with the finger and sound and no more stones could be felt. The patient died some two weeks after from hæmoptysis, and at the autopsy it was found that the kidney was so adherent to the surrounding parts that it probably could not have been extirpated. Several more stones were found in the upper end of the kidney in cavities separated from the pelvis by connective tissue. Prof. Guyon, in the course of his remarks on this case, states that here nephrotomy was preferable to nephrectomy, and that had the kidney been properly incised the other stones would have been found, that in such cases the kidney should be freely incised and every nook and cranny explored; he holds that if this were done in cases of calculous pyelitis nephrectomy would never be called for.

Formerly it was feared that free incision of the kidney would cause severe and dangerous hemorrhages, but experience has taught surgeons that the danger is an imaginary one, and that kidneys which are much disorganized may be incised without fear of bleeding, and that even in healthy kidneys the hemorrhage from incisions is easily and permanently controlled by pressure.

In such cases as the one above narrated, where the stone is of great size and the kidney is enlarged, the mere extraction of the stone in the pelvis should not satisfy the operator; he should thoroughly examine the kidney in every part by free incisions so as to be sure no calculus is left behind. External manipulation of the kidney is not sufficient to detect stone, and in such cases as my own, even exploration through the kidney pelvis would fail, without further incision, to detect calculi unconnected with that in the pelvis.

Up to a short time ago the largest stone removed by lumbar incision was under two ounces in weight. Lauenstein[1] reports a successful case of removal of a large calculus (weighing 25 grammes and composed of the triple phosphates) from the pelvis of the kidney. He had to break the stone with a lithotrite before he could extract it. In his paper he states that it was the largest stone removed up to that time, though not the heaviest. Three months after the operation the sinus in the loin had completely healed and when the article was written the patient was perfectly well.

Dr. John Neill,[2] after relating a case of large renal calculus found after death, quotes from *Cyclop. Pract. Med.* the following case: "A remarkable instance of such calculus occurred in the person of a natural daughter of Sir Richard Steele. No nephritic symptoms took place until shortly before death, when severe pain was felt in the region of the right kidney, fever followed and speedily proved fatal. A calculus of oxalate of lime weighing 7½ ounces was found in the right kidney which was so thin by absorption as to be reduced to a mere membrane. In this instance the stone could be felt, during life through the loins, inducing a belief that the kidney had become ossified (Catal. Museum of Royal Coll. Surg., London. Note by John Hunter)." In this case there was evidently but little suppuration, or the stone could not have been so easily recognized.

Mr. Victor Horsley[3] on Sept. 16, 1885, removed a stone weighing 2¼ ounces from the pelvis of the kidney of a middle aged woman; ten days after she was doing well. It was the largest stone removed from the kidney up to that time.

Mr. W. L. Brown[4] reported a case before the Birmingham and Midland Counties Branch of the British Medical Association, in May last, where he had removed from the kidney by abdominal section a stone weighing 11 ounces. The kidney tumor occupied the right half of the abdomen and contained three pints of pus. The cut edges of the cyst were stitched to the abdominal walls and the cavity drained. The patient died suddenly eleven days after the operation from heart clot. So far as I know, the stone in my case is the largest ever removed by lumbar incision.

[1] La Semaine Médicale, Feb. 10, 1887.

[1] Archiv für klin. Chir., Bd. 34, Heft 1, 1886.
[2] American Journal of the Medical Sciences, July, 1849, p. 121.
[3] Brit. Med. Journ., Sept. 26, 1885.
[4] Ibid., March 6, 1886.

ELEPHANTIASIS ARABUM OF THE EXTERNAL GENITALS OF A NEGRESS.

BY WILLIAM E. MOSELEY, M.D.,
AND
ROBERT B. MORISON, M.D.,
OF BALTIMORE.

MRS. G., a large, powerfully built, dark negro woman, apparently between forty and fifty years of age, first presented herself at my private dispensary July 15, 1886. Although a fairly intelligent woman for one of her class, it was difficult to get anything like an exact history of her case. So far as I could find out, her family history was good, as had also been her own general health previous to the first appearance of her present trouble. Her early menstrual history was normal, and since her marriage, whenever she was neither pregnant nor nursing, the flow has recurred regularly and normally, except for an occasional menorrhagia, which, together with a free leucorrhœa (both vaginal and cervical), can be accounted for by the lacerated cervix and perineum and subinvoluted uterus which exist. She has had fourteen living children and several abortions. The last child was born four years ago, and the last abortion (at about one or two months) occurred in April, 1886, only three months before I first saw her.

Some eight or nine years ago she first noticed a decided itching and burning about the vulva and extending into the vagina, which condition was soon followed by what she called "blood boils" about the vulva, and which were accompanied by a great deal of pain and discharge. Following this there was general enlargement of the right *labium major*, and about the same time itching and burning in the fold under each mammary gland, and a thickened condition of the skin in that location.

From that time the disease steadily increased until, when I first saw her, her condition was as follows: The skin in each axilla and in the fold directly under each mamma was much thickened and lying in folds. The skin over the mons veneris was thick, hard, and nodulated, as was also much of that over the nates and around the anus. The right labium major was a large pendulous mass, measuring fully 7 inches in length, 4 inches in breadth, and 2½ inches in thickness. [The exact measurements of the growth, after being in alcohol for nearly five months, are, length 14 cm. (5½ inches), breadth 7.5 cm. (3 inches), thickness 5 cm. (2 inches).] The mass had a hard but rather boggy feel, the skin thickened, and in the lower portion it had a peculiar warty appearance, due to the enormously enlarged papillæ. The left labium major was about one-third the size of the right, was softer and more elastic, and the skin less thickened. The diseased parts were constantly moist, and the only complaint of the patient, aside from the inconvenience of having so large a mass hanging down between her thighs, was the intolerable itching and burning wherever the diseased condition showed itself, together with certain "hot spells and pricking and crawling in the flesh all over." She is able to do considerable work, but is not as strong a woman as one would expect to find in a person of her age and build. Neither the nymphæ nor clitoris were at all involved.

As the weather was very warm, and any prolonged stay in bed would be most uncomfortable, I postponed surgical interference until the fall, giving her a saturated solution of boracic acid for local application, and from the use of which she obtained great relief.

On October 21st, under ether, I removed the right labium major, by means of a Paquelin knife, kept at the lowest possible cutting heat. In spite of every precaution, there was very free hemorrhage, the bloodvessels, especially the veins, being enormously dilated. Bleeding points were tied, and the line of incision sustained by a number of silver sutures. The wound was washed out daily, and dressed with iodoform and tarred jute. Healing took place very promptly, considering the method of operating, and the unavoidable sources of irritation. About half the diseased tissue over the mons veneris was dissected off with a knife, and the edges brought together. This portion healed by first intention. It was thought best to leave the left labium major for a second operation; and as it is the cause of a good deal of discomfort, and is increasing very perceptibly in size, it will be removed at an early date. At this writing there is no sign of any return of the disease on the right side of the vulva.

An item of some interest, as showing an anatomical peculiarity of the male negro, is developed by recalling the fact that in spite of the decided obstruction to coitus offered by the enlarged external lips, this woman aborted only three months previous to my first seeing her.

MICROSCOPICAL EXAMINATION.[1]—The horny layer of the epidermis was normal in its thickness, nor was it changed in its general characteristics. It was intact and the flattened cells, of which it is composed, were unaltered in their relative position or their size. Where in the papillæ the lymph vessels had become so much dilated as to occupy the entire papilla, and lower layer of epidermis, the horny layer stretched across the space forming its upper boundary.

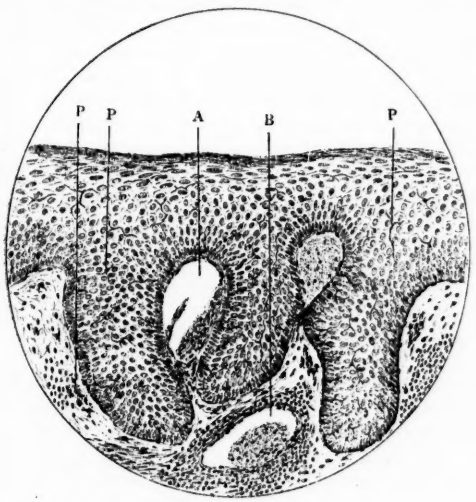
In the rete Malpighii the epidermic cells, especially those in the lowest layer which joins the connective tissue of the corium, were larger than normal. They were swollen, their outer membrane more than usually distinct, and their nucleus or nuclei also enlarged, while the nucleolus was small, and pushed apparently to one side in the nucleus. The peculiar arrangement of pigment in this layer, which is to be described later on, was its most striking feature.

The papillæ were abnormally irregular in length and breadth. Here and there, owing to the dilatation of the lymph-vessels, they were entirely absorbed, and a thin layer of epidermis was all that held their portion of the skin intact. In many places where the vessels of the papillæ were visible, the lymph-vessels were dilated and their contour uneven; no hair follicles were found in any of the sections

[1] The histological investigation was made by Dr. Morison in the Johns Hopkins Laboratory.

examined. The sweat glands were the seat of a well-defined round cell infiltration, and their bloodvessels were enlarged, but their usual glandular appearance was not obliterated or altered.

The vessels of the corium were somewhat dilated and were surrounded with round cell infiltration, which, however, affected more intensely the lymph-vessels. The latter vessels were dilated, uneven in outline, or completely filled with lymphoid cells. Their endothelial lining was thickened, and in the tissues around them there was an infiltration of lymphoid cells. The thickening of the endothelium in the smaller lymph-vessels was sufficient to render them impassable. All through the connective tissue of the corium, small and large dilatations of the lymph-vessels were seen. Many of these were lined with endothelium and filled with fibrin. The endothelium was thickened, the nuclei could be beautifully stained, while here and there it was torn away from the surrounding tissue, and lay with one free end within the space itself. See A and B.



A. Dilated lymph-vessel with the endothelium torn.
B. Dilated lymph-space containing fibrin, and surrounded by wandering lymph-corpuscles.
P. Pigment granules, which are seen in clusters at various points in the corium and as ramifying lines in the epidermis.
(We wish to acknowledge our obligation to Dr. A. C. Abbot, of the Pathological Laboratory, Johns Hopkins University, for this drawing.)

The connective tissue fibres were thickened. The smooth muscular fibres of the skin were enlarged and increased in number.

The nerves, as far as an examination of them was possible, seemed to be unchanged.

All the microscopical appearances here described point this specimen out as coming from a typical case of E. Arabum. The changes in the size and the contour of the lymph-vessels and spaces, the increase in the size and number of the smooth muscular fibres, and the swollen appearance of the epidermis are all characteristics of this disease.

Allusion was made above to the remarkable arrangement of pigment seen in this specimen. In the corium, underneath the line of the papillæ, a comparatively large quantity of pigment granules was visible. It was collected together in small heaps within round and branching cells, and also apparently scattered about in fine granules without them. In the epidermis, besides the ordinary collection of pigment in the lower layers of the rete Malpighii, it was seen to run upward from these layers in chains of very fine granules, so that it made a network of dark lines, which surrounded the epidermic cells as far up as the horny layer. It gave the sections the appearance of having been stained with gold. (See P.)

As this is a most unusual appearance in the skin, even of a negro, where the pigment is so profuse, the question of how it happened to be thus arranged is an interesting one.

Experiments by Key, Retzius and by Unna tend to prove the fact that the lymph circulates in the epidermis between the epidermic cells. Injections of the lymphatics of an œdematous skin with gold have shown that the gold will sometimes penetrate between the epidermic cells, as far as the horny layer. Unna supposes that, in an œdematous skin where the lymph spaces are enlarged, the pigment, if present in the lower layers, is taken up by the lymph-bodies and deposited between the cells of the epidermis.

In the specimen here described, although in places the pigment was seen to be within cells, it was apparently for the most part without them. The fine network of dark lines was probably made by the lymph bodies, which deposited the pigment as they circulated between the epidermic cells.

MEDICAL PROGRESS.

The Use of Iodoform Gauze in Gynecology. —Fritsch writes, in the *Centralblatt für Gynäkologie* of March 12, 1887, as follows regarding the uses of this material in gynecology; he uses it principally for tampons, choosing gauze containing ten per cent. of iodoform, the drug being in the form of powder or suspended in glycerine. The tampons used are made of pledgets three-fourths of an inch long and about two inches wide, combined as occasion demands. They remain longer antiseptic than material dipped in five per cent. solution of carbolic acid, they can be left *in situ* from four to six days, and can be removed without pain and often by the patient herself. These advantages find excellent illustration in the palliative treatment of carcinoma; Fritsch calls his method of treating this affection by this means the "dry" treatment of carcinoma. The secretion, hemorrhage, decomposition, and pain are lessened, so that the patient is able to go about with comfort; cases of cancer have been kept without odor until death by this means. In a number of cases the uterus was reduced to a mere shell, the inner surface of which presented a mass of anæmic granulation tissue. Fritsch has, in many cases, curetted away the cancerous tissue and cauterized its site with the Paquelin thermo-cautery; the uterine cavity has then been thoroughly powdered with iodoform and

tannin, and to stop bleeding and favor uterine contraction a tampon is placed in the uterine cavity which may remain there five or six days. The after-treatment consists in the insertion twice weekly of iodoform and tannin or iodoform and glycerine tampons; they may be most easily inserted by curved dressing forceps.

Iodoform gauze is also used with good results as a tampon after the removal of placentæ and the remnants of ova left after abortion; the uterus should be first gently curetted, washed out with an antiseptic fluid, and then tamponed with gauze.

The cervix may also be tamponed to advantage after the various operations which are there performed.

After removal of cancer of the uterus and pelvic sarcomata, where the peritoneum cannot be united over the stump, iodoform gauze should be packed into the wound; by virtue of its absorbent powers it will serve as a most efficient means of drainage and disinfection.

After laparotomies, in which the tissues are so diseased that it is impossible to unite by means of suture, the tissues should be powdered with iodoform, and brought together by gauze compresses, and from the lower end of the wound a strip of gauze should emerge for drainage. The so-called "capillary drainage" of serum and other fluids of the wound effected by the gauze is very marked; iodoform poisoning was never observed.

The writer cites 6 complicated cases—3 ovarian tumors, one of which had suppurated; 2 extrauterine pregnancies; and 1 carcinoma of the body of the uterus which healed promptly after operation by the method described.

ON THE DIFFERENT MODES OF ADMINISTERING MERCURY IN SYPHILIS, AND THE INDICATIONS FOR THEIR APPLICATION.—At the meeting of the Medical Society of London, held February 21, 1887, DR. E. MILNER stated that he believed that mercurial preparations might be administered somewhat as follows: Green iodide of mercury with Donovan's solution in large doses in light-haired people, especially wine-drinking females who suffer from an obstinate vesicular eruption. German blue ointment in the incipient tubercular syphilide occurring in dark-haired beer-drinkers. In drunkards with a severe and angry-looking rash, green iodide of mercury, Donovan's solution, and iodide of sodium. Calomel vapor in the treatment of indurated local sores and ulceration of the extremities. DR. DRYSDALE thought that when the use of mercury itself was questioned, the differences between its compounds need not be discussed. He considered potassium iodide the proper remedy in the tertiary stages. DR. LAUDER BRUNTON thought it a question whether mercury is most injurious to the germs of the disease or to the tissues. Potassium iodide is not a germicide, and possibly its action is on the tissues. DR. J. ALTHAUS has found blue ointment, with as much lanoline, excellent, also tannate of mercury internally.—*Provincial Medical Journal*, April 1, 1887.

A SIMPLE METHOD OF PREVENTING ARTERIAL HEMORRHAGE.—DR. MUSCROFT, of Cincinnati, described in the *Lancet-Clinic* of April 2, 1887, the following method of preventing arterial hemorrhage, which was entirely satisfactory in a successful amputation at the hip-joint, and a high amputation of the arm for elephantiasis:

"He proposed to pass a strong pin or needle under the femoral vessels *en masse*, high up in Scarpa's triangle, and then, by winding a cord around the exposed ends of the needle, protected by corks, in a figure-of-eight turn, to secure sufficient pressure to occlude the artery completely. This method of compression before the operation could not possibly do any harm, and if properly applied there could be no danger of hemorrhage. The additional advantage would be secured that there were no tourniquets or bandages to slip when their point of resistance was removed by the disarticulation of the head of the femur, and the apparatus for controlling the hemorrhage was not at all in the way of the operator or his assistants."

As soon as the patient was fully under the influence of the anæsthetic, a needle one-eighth of an inch wide, slightly bent at the point, about the thickness of a dime, and four inches long, was introduced perpendicularly into the front of the thigh, about an inch and a half below Poupart's ligament. The exact point of entrance was one-fourth inch internal to the combined sheaths of the vein, artery, and nerves. The point was pushed beyond the vessels, then turned outward until the needle had passed beyond them; the point was then pushed out through the integument. The needle was then behind the vessels and nerve. A piece of cord was passed under the heel and point of the needle, forming a figure-of-eight ligature. Before the ligature was applied the femoral artery could be felt pulsating strongly, but when it was tightened the pulsation below the needle had ceased entirely.

The compression with the needle and figure-of-eight ligature was entirely successful in preventing any bleeding from the brachial artery. The needle was introduced from before backward, and parallel to the borders of the axilla. The point and heel of the needle were protected, as on the former occasion, by corks.

AMMONIUM PICRONITRICUM.—The following is a formula for the administration of this substance, which has been used in the treatment of malaria:

℞.—Ammonii picronitrici . gr. 4½ to gr. 24.
Pulv. rad. glycyrrhizæ gr. 24.
Syrupi glycyrrhizæ . ♏ 24.
M. div. in pil. 30 in num.

It should be observed that the salts of picric acid, when mixed with dry substances, form explosive compounds, and a liquid should always be used in their combinations.—*Therapeutische Monatshefte*, March, 1887.

A METHOD OF PREPARING CARBOLIZED GAUZE.—The following is the method described by ENGLAND in the *Journal of Pharmacy* for April, 1887: This is by far the most important and the most in demand of all the gauzes and enters into medical practice whenever the Lister dressings are employed. It is very apt to deterioration on keeping from the volatilization of its contained carbolic acid, but this can, in a very large measure, be prevented if the finished product be wrapped in paraffin paper. The formula employed is based to a certain extent upon that of Von Brun's (carbolic acid 10 parts, resin 40 parts, castor-oil 8 parts, and alcohol 200 parts), but it varies in containing glycerine in the place of the

oil, and, in addition, petroleum benzin. The following formula contains ten per cent. in weight of carbolic acid, in the finished product:

Carbolic acid . .	239 gm. (8 oz. av., 188 gr.)
Alcohol . . .	1200 gm. (42 oz. av., 144 gr.)
Glycerine . . .	150 gm. (5 oz. av., 127 gr.)
Resin . . .	300 gm. (10 oz. av., 255 gr.)
Benzin . . .	1400 gm. (49 oz. av., 168 gr.)
Gauze . . .	1700 gm. (59 oz. av., 423 gr.)

Triturate the resin in a mortar with the benzin, add the alcohol, in which has been dissolved the carbolic acid, and then add the glycerine. Lastly, soak the gauze in 3- or 6-yard pieces, in this mixture, kneading well, to secure uniform diffusion; express and hang the gauze on frames to dry. It dries very quickly, after which, fold in rolls and wrap up in paraffin paper. In order to increase the efficiency of the gauze, it has been recommended that the layers of gauze, prior to application, be dipped into a 1 to 40 aqueous solution of carbolic acid.

In this gauze the acid is, of course, the active ingredient. The resin is used to prevent the washing away of the acid by the discharges from the wound, while the glycerine is employed to make the resin less brittle, and help, also, the retention of the acid in a more than ordinarily soluble form. Benzin is used to reduce the cost.

Disinfection of Dwellings and of Inhabited Rooms.—Drs. Guttmann and Merke, of the City Hospital Moabit, in Berlin, have made an investigation as to the relative value of various methods of disinfecting inhabited rooms, and have published the results in a paper in *Virchow's Archiv* of March 2, 1887. The main points kept in view in the inquiry were that a satisfactory method should destroy the vitality of the bacteria, should not injure the house or furniture, should not be dangerous to the health of the person in the house or of the person applying it, should involve the least possible labor in its use, and be as cheap as possible. The bacillus anthrax was taken as the test organism, and was dried in silk fibres and scattered through the room, on rugs, etc. Disinfection was attempted by rubbing the floors, ceilings, and walls with disinfectant fluids and by spraying the same on the rugs, etc. The solutions experimented with were a five per cent. solution of carbolic acid, and solutions of bichloride of mercury of various strengths. Their conclusion is that a solution of bichloride of mercury, 1 to 1000, used as a wash and a spray, is the most certain, the cheapest, and in all respects the best for disinfecting inhabited rooms.—*Sanitary Engineer*, April 9, 1887.

Treatment of Phosphaturia.—Cantani is quoted as prescribing as follows in the *Centralblatt für klinische Medicin* of March 26, 1887:

℞.—Acid. lactic.	♏ 45.
Aq. fontis	℥ 6½.
Aq. menth. piper. . . .	ad ℥ 8.—M.

Sig.—Two or three tablespoonfuls in half a glass of soda water every two hours.

Bacteria in Ice.—Fränkel, of Berlin, has examined ice for bacteria, and has found them present in considerable numbers. Ice from the water of springs showed bacteria, as did the ice of river water. Bacteria, however, were not found in ice made from distilled water, and ice intended for direct application to wounds and other portions of the organism exposed to direct contagion should be made from distilled water. Ice from ordinary sources of supply may be used to preserve foods, as meats, if the food be thoroughly cooked at high temperature before it is eaten. Of course, when ice is not brought in contact with food, but is packed about vessels, it need not be carefully selected.—*Centralblatt für klinische Medicin*, March 26, 1887.

The Results of Pasteur's Treatment.—Lutaud, of Paris, editor of the *Journal de Médecine*, has written as follows regarding the results of Pasteur's method:

In answering the objections of M. Peter, Vulpian replied at the Institute, on January 24th, and gave the statistical statements which the Institute immediately sent out all over France. He said: "We have inoculated 3000 persons: the death-rate from rabid bites was formerly 160 per 1000. Without M. Pasteur, then, 320 persons would have died in 1886 from hydrophobia; as only 22 died, we have saved 300 lives."

The arithmetic seems correct; but what is no less evident is that, by M. Pasteur's novelty, the number of persons attacked by hydrophobia is suddenly increased to an extraordinary extent. It must be ascertained how many deaths occurred before M. Pasteur. If the number in 1886 is as high as it was before, it follows that the new treatment is without effect.

What was the death-rate before 1885? An eminent professor, Tardieu, found 25 deaths annually during a period of thirteen years. Professor Brouardel lately, during a period of twenty-three years, has found 30 cases yearly. Tardieu said that nearly all the departments answered his circular. M. Brouardel states that only two-thirds gave him the information that he required. Admitting this statement, if 30 is the number of deaths for two-thirds of the departments, 45 will be the number for the whole of France.

Now, in 1886, 39 deaths have occurred. Where, then, are the advantages of the new method?

With regard to the terrible charge brought against M. Pasteur by M. Peter of causing paralytic hydrophobia by his inoculations, M. Vulpian says that the disease is not so rare as is generally believed, and M. Brouardel has recalled one instance spoken of by Van Swieten.

Meanwhile, until M. Vulpian's assertions as to the infallibility of M. Pasteur's method are confirmed by new facts, I advise my professional brethren to keep to the old method of cauterizing the wounds. The statistical accounts prove that out of the 25 fatal cases of hydrophobia in 1886, only 3 had been previously cauterized. This neglect arises from the blind faith in M. Pasteur's treatment which is at present so prevalent.

I may add, that nine persons have died during the last two months with strange symptoms of paralysis (paralytic hydrophobia) after having been submitted to the new intensive method. These facts are perfectly conclusive. If M. Pasteur cures hydrophobia, the cure is not a certainty as affirmed by M. Vulpian, and the new intensive method is far from being harmless.—*British Medical Journal*, April 2, 1887.

Formulæ Successfully Used in a Case of Severe Croup.—Lewentaner, of Constantinople, successfully

treated a case of severe croup in which suffocation was imminent by a large dose of turpentine, as described in THE MEDICAL NEWS of March 12, 1887; he used in addition the following formula in spray, which we take rom the *Centralblatt für klinische Medicin* of March 26, 1887:

℞.—Tinct. eucalypt. glob. . . . ♏ 75.
Acid. carbolic. cryst. . . . gr. 75.
Ol. terebinth. rect. . . . ʒ 2½.
Alcohol . . . . . ad ʒ 10.

The following was given internally:

℞.—Hydrarg. cyanat. . . . gr. ½.
Tinct. aconit. . . . . ♏ 30.
Aq. destillat. . . . . ad ʒ 4.—M.
Sig.—To be taken *during twenty-four hours.*

TURPENTINE IN IMPETIGO.—DR. SAERBS recommends essence of turpentine as a local application in impetigo of the scalp or other hairy part. The preparation should be well rubbed into the skin and the roots of the hair with the fingers. After about five minutes it should be washed off with carbolic soap, and afterward with warm water. Tincture of iodine should be next applied. This treatment should be carried out once or twice a day; it causes slight itching, but is not painful. The author has found it successful where other modes of treatment have failed.—*British Medical Journal*, April 2, 1887.

THE TONIC TREATMENT OF THE HAIR.—DR. FOLEY, of Boston, writes as follows in the *New York Medical Journal* of April 9th, on this subject:

A wineglassful of aromatic spirits of ammonia added to a basinful of water is very cleansing and refreshing. Care should be taken that it does not get into the eyes. The shampoo as given by the barber is too rough and vigorous, and the conglomeration he puts on the head afterward is anything but beneficial. While one performs daily ablutions of the face, hands, and body, the head is generally left out. This should not be; it is as necessary to wash the scalp as any other portion of the body. The hair should be brushed daily. Too much violence must be guarded against. It should be brushed gently in the direction in which it lies. A harsh brush should be used to cleanse the scalp of dust and dandruff, and then the hair-shafts should be smoothed and polished by means of a softer brush. The scalp should receive a roseate glow. This insures quicker circulation in the follicle about the hair-papilla, and hence the growth is invigorated. Hair-tonics have the same effect upon the skin—viz., a stimulating effect upon the skin capillaries. Morning and night, before retiring, is the best time for brushing the hair. Too hard brushing tends to produce dandruff. In brushing, the object is to cleanse it from extraneous materials, such as feathers, dust, dandruff, and concrete sebaceous material, which often oozes out upon the scalp, to make it smooth, and to bring truant hairs into the right place, and set at harmony discordant filaments.

Friction polishes the hair as well as bandoline or ointment. The end we seek in building up a scanty hair crop is a proper amount of blood-supply, through friction and hair-tonics. The appended is an excellent hair-tonic:

℞.—Acid. carbolic . . . . . ʒ ss.
Tr. nucis vom. . . . . ʒ ij.
Tr. cinchonæ rubr. . . . . ʒ j.
Tr. cantharidis . . . . . ʒ ss.
Aq. cologniensis } . āā q. s. ad ʒ iv.—M.
Ol. cocois }

Apply once or twice a day to the scalp by means of a soft sponge. This will prevent the hair from falling out if it does not produce a luxuriant crop.

NEW FORMULÆ FOR HYPODERMATIC INJECTIONS OF SUBSTANCES COMBINED WITH LIQUID VASELINE.—MEUNIER, of Lyons, continues his series of formulæ of combinations with liquid vaseline as follows:

℞.—Eugenol . . . . . 3 parts.
Liquid vaseline . . . 100 parts.—M.
Filter twice.

Eugenol, active principle of essence of cloves, is considered a very powerful microbicide.

℞.—Helenine . . . . . 1 part.
Liquid vaseline . . . . 100 parts.

Triturate together while cold; heat over a water bath until solution occurs; filter through double paper.

Helenine is the active principle of the essence of elecampane root, and is regarded as a microbicide.

The greater number of alkaloids are very soluble in vaseline, but, by adding an intermediate dissolvant, the quantity of alkaloid dissolved can be greatly increased. Injections should be made immediately after their preparation, to avoid precipitation of a portion of the solid.

℞.—Cocaine . . . . . 2 parts.
Liquid vaseline . . . . 100 "

Triturate; heat over a water bath, filter through two papers.

This solution is employed for local anæsthesia upon the skin; in the eye; in the larynx, and about the teeth; its action is more prolonged and sure than that of a watery solution, because of the penetration of the vaseline beneath the skin:

℞.—Chloroform . . . . 20 parts.
Liquid vaseline . . . 80 "

This injection is without pain, and is very useful in sciatica and neuralgia:

℞.—Crystal. aconitine (Duquesnel) gr. $\frac{3}{200}$.
Chloroform . . . . ♏ 15.
Liquid vaseline . . . ʒ 1.

Dissolve the aconitine in chloroform, mix with the vaseline and filter.

The contents of Pravaz's syringe, containing $\frac{8}{100}$ of a grain of aconitine, may be given for intercostal neuralgia:

℞.—Crystallized digitaline . . gr. $\frac{1}{100}$.
Chloroform . . . . ♏ 15.
Liquid vaseline . . . ♏ 75.

Dissolve the digitaline in the chloroform and add the vaseline.

This may be injected for cardiac asystolia, when caffeine and digitalis are not tolerated by the stomach, in doses of sixteen minims:

℞.—Quinine . . . . . gr. 3.
Absolute alcohol . . . gtt. 10 to 15.
Ether . . . . . gtt. 10 to 15.
Liquid vaseline . . . ʒ 5.

Triturate the quinine in alcohol until completely dissolved, add the ether and then the vaseline, and filter.

Meunier, discussing Bouchard's experiments in producing cataract in the eyes of animals by naphthaline, has injected vaseline into the eyes of sheep and rabbits, a third or a fourth the volume of the eye, with perfect diffusion and no irritation.

He finds that cholesterine is soluble in vaseline in proportion of 1 to 100 at the temperature of the human body. It seems rational to suppose that hepatic calculi may be dissolved by injections of vaseline.

It may be also given in capsules in typhoid fever and diseases of the digestive tract, as it is inoffensive and digestible. Substances intended to disinfect the intestines, as iodoform, thymol, and eucalyptol, can be thus injected easily and harmlessly.

Meunier, however, considers *pure* liquid vaseline the most satisfactory medium for the hypodermatic injection of the remedial agents mentioned.—*Bulletin de Thérapeutique*, February 28, 1887.

Splenectomy for Wandering Spleen.—Dr. W. H. Myers, of Fort Wayne, Indiana, reports the following case in the *Journal of the American Medical Association* of April 2, 1887:

Upon making an examination I discovered that the tumor was then resting on the brim of the pelvis, and extending above the umbilicus. It had suppurated, and three sinuses existed, communicating with the abscess. The discharges were offensive, almost intolerable. The patient was emaciated, had chills with profuse perspiration at night, and great loss of appetite. Her surroundings deterred me from venturing to relieve her by any surgical procedure at her home. By agreement she was brought to Fort Wayne and placed in St. Joseph's Hospital.

The cleansing of the skin over the tumor, and for some distance around, was carried out by washing it with a carbolic acid solution, 1–20, after which stimulants were administered, when she was placed under the influence of ether and removed to the operating table. The line of incision was six inches in length, extending two inches above the umbilicus and made in the *linea alba*. During the progress of the operation the strictest antiseptic precautions were observed. Silk ligatures, previously carbolized, were applied to the bleeding vessels and then cut short; the hemorrhage was thus arrested completely before dividing the peritoneum. The peritoneum was caught up with forceps, and incised with a knife sufficiently to admit the completion of the incision with scissors. This was followed by a free discharge of sero-purulent fluid, received upon the towels and sponges conveniently placed for this purpose. The tumor was now freely exposed, and proved to be a displaced and wandering spleen, indurated, and greatly enlarged, lying in a peritoneal abscess. I succeeded in lifting the spleen from its resting place, the brim of the pelvis, and in securing the pedicle, composed of the vessels and fibrous tissue, much elongated. While the tumor was partially lifted from its bed, I succeeded in transfixing the pedicle with a needle, armed with a double thread of silk, and ligated it in two portions. The pedicle was then cut short and dropped back into the cavity occupied by the spleen; so also were the ligatures. Into the cavity occupied by the spleen carbolized sponges were introduced repeatedly until the hemorrhage was entirely arrested. This was followed by the insertion into the lower angle of the wound of a large size glass drainage-tube, and I proceeded to close the wound with stitches of silk thread, including the peritoneum. After the edges of the wound were carefully approximated, and the surface washed with carbolized water, protective gauze was placed over the line of incision, and over it a layer of carbolized cotton and antiseptic gauze; and over these a firm snug-fitting flannel bandage; over the mouth of the glass tube, carbolized gauze. The spleen weighed seven pounds.

The patient was now removed and placed in bed, wrapped in warm blankets, and bottles of hot water placed about her. The evidence of shock disappeared in a few hours. The after-treatment consisted in the administration of tonics, stimulants, and food, washing out the abscess cavity daily with carbolized water, 1–20, until the removal of the drainage-tube; this occurred on the twelfth day.

On the ninth day the first dressing was removed and union was found to be almost complete; the deep stitches were removed, and the superficial stitches allowed to remain until the fourteenth day.

Her pulse never exceeded 110, and her temperature never exceeded 102°. Her appetite improved rapidly, and her previous bad symptoms disappeared, so that in twenty-one days she was enabled to leave the hospital, and her recovery at the present time is complete.

Operation for Post-nasal Sarcomatous Tumor.—Dr. S. P. Duffield writes as follows in the *American Lancet* of April, 1887, of a visit paid by him to von Wahl, of Dorpat, Russia, an eminent surgeon, who succeeded Bergmann in the professorship of surgery:

"An operation I saw him perform for post-nasal sarcomatous tumor was as follows: Instead of the old-fashioned Mott way of splitting the nose, he made an incision across the nose, following the line of the articulation of the ossa nasi with the os frontis, and then down the right side in the line of the articulation with the maxillaris; breaking through the articulation of the os frontis with chisel and mallet, he turned the nose over upon the cheek and had a good, unobstructed opening through which to work, and with a curette removed the tumor piecemeal, replaced the nose, fastened with sutures, dusted with iodoform, and dressed as usual. Two days after the patient came into the clinic, and the nose looked as natural almost as ever."

Infantile Constipation.—A very successful remedy for this is podophyllin, in small doses; iridin may be combined with it with good effect. Make a tincture of the following:

Podophyllin resin.	gr. viij.
Iridin	gr. v.
Spt. ammon. arom.	℥j.

Digest for several days, and filter.

One or two drops of this may be given at bedtime on a small piece of loaf sugar, or the dose may be combined in mixture along with syrup of orange. This is the dose for a child of one year and under.—*The Chemist and Druggist*, March 19, 1887.

THE MEDICAL NEWS.

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SATURDAY, APRIL 23, 1887.

ETHER OR CHLOROFORM?

THE *vexata questio* of a suitable anæsthetic continues to be far from a unanimous decision. The increasing employment of ether, and the corresponding disuse of chloroform during several years past, are the result of a conviction that the former is far safer. No attentive observer, however, can fail to see the evidences of a beginning reaction in favor of chloroform. The opinions expressed by members of the New York Academy of Medicine during a recent discussion, a report of which appeared in our last issue, indicate that the superiority of ether is not admitted by some of our New York colleagues as an article of medical faith. It is obvious enough that the facts brought forward by Dr. Gerster are of a character to disturb the confidence of the ether partisan, and will do so unless an erroneous interpretation has been given to the fatal cases.

During this discussion, the belief was expressed that ether owed the immunity from accidents, which had hitherto attended its administration, to the comparatively small number of inhalations formerly practised, and that chloroform had got its evil repute from its indiscriminate use in a vast number of cases. It was, also, intimated that deaths from ether have been increasing with an increasing number of inhalations. In respect to the character of their comparative danger, it appears to be the consensus of opinion that chloroform is more apt to kill during the inhalation, whilst ether induces morbid states of the respiratory organs which prove fatal subsequently.

If the experiences of our New York colleagues are confirmed by general observation, the questions will be—When ether? When chloroform? and the decision will rest on the provisions which can be made use of, to render one or the other safer under the existing conditions. The immediate and remote dangers being known, how can we best avoid their occurrence by modes of practice now available or to be hereafter discovered?

That the condition of anæsthesia as now produced, must inevitably be a condition of danger, can hardly be disputed, since it consists in an entire suspension of the functions of animal life. The way to safety consists in maintaining the organic functions of circulation and respiration, for the failure of one is of necessity fatal to life. That anæsthetic which least endangers these functions, or whose injurious action is most easily obviated, is best, provided that it has no after-effects, which, if slower, are equally fatal.

We do not find in the discussion under consideration an adequate statement of the means to prevent or to remove dangerous indications. That does not appear to have been Dr. Gerster's intention, and in the course of the discussion this subject was only incidentally mentioned. This, however, is an important part of the subject, since the decision of the question may be much influenced by the readiness with which danger-symptoms may be prevented.

"Mixed anæsthesia," as it has been designated with little felicity, has paramount importance in this connection. By this term is meant the suggestion made, originally, by Bernard, and afterward practised and strongly advocated by Nussbaum, that morphine be administered subcutaneously before commencing the inhalation. Of late the combination of morphine and atropine has been advantageously substituted. The good effects of this practice are these:

It facilitates the inhalation by allaying the irritability of the broncho-pulmonary mucous membrane; it prevents that tetanic condition of the muscles, especially those of respiration, called "the stage of rigidity;" it prolongs the insensibility with a less quantity of the anæsthetic; it diminishes the shock of the surgical procedure; it serves to maintain the functions of respiration and circulation; it relieves much of the after-pain, and it prevents the inflammatory reaction which arises after the immediate effects of the anæsthetic are spent.

We know that it has been asserted by the opponents of this practice, that the hypodermatic injection is only an addition to the dangers of the anæsthesia. It may be replied, that any misadventure properly attributed to the injection was due to the careless use of too large a dose—for the amount necessary will rarely exceed $\frac{1}{8}$ of a grain, and often not more than $\frac{1}{12}$ grain of morphine, and $\frac{1}{100}$ grain or even $\frac{1}{200}$ grain of atropine.

To inefficient, negligent, even bad modes of administration, may often be referred the unpleasant

action, or the fatal result. Inattention to the high density of chloroform vapor, and to the proportion of air necessary to carry on the function of the red globules of the blood, are two common causes of accident from the inhalation of chloroform. Then it is we hear of a mysterious idiosyncrasy—that a few whiffs of vapor caused death because some inexplicable condition existed—when the real truth is that those few "whiffs" consisted of chloroform vapor and that the red globules were suddenly deprived of their oxygen, and the motor ganglia of the heart immediately ceased to functionate. On the other hand, in giving ether, so much air is admitted that the stage of excitement is greatly lengthened, the rigidity becomes extreme, and the respiratory organs are irritated by the prolonged contact of the ether vapor. If ether is properly administered and insensibility is promptly produced, fewer examples of pulmonary inflammation may be expected to occur, if any were ever due to this cause.

As between ether and chloroform, the suddenness with which the latter acts, and still more the character of the action, when it causes danger-symptoms, makes it by comparison far less suitable as a general anæsthetic than the former, and as the untoward effects of ether are much more amenable to treatment by the usual restorative measures, its advantages are still more conspicuous. If, however, the after-results of ether administration are so serious as the recent experience seems to indicate, the choice between them must be decided by other considerations than those of safety. It may, indeed, finally appear that the choice between them is to be determined by the character of the case in which anæsthesia becomes necessary. In that event, the mode of administration will be the chief object of attention. It is surely not flattering to the professional vanity, as it is rather derogatory to the professional humanity, that so many fatal cases are attributable to carelessness, to ignorance, and to mere accident that might have been avoided.

THE TREATMENT OF BACKWARD DISPLACEMENTS OF THE UTERUS.

Amid the animated discussions that have been provoked by the procedures advocated by the bolder surgeons of the present day, for whom the peritoneal cavity has none of those terrors that it once inspired, some minor problems in gynecology have suffered comparative neglect. What gynecologist, what general practitioner, indeed, is there to whom the treatment of backward displacement of the uterus is not a problem presented constantly for solution? And yet it is a problem still unsolved. Shall he use mechanical supports? shall he employ electricity? shall he perform a plastic operation in the vagina? or must he accept the teachings of those who look to laparotomy as the panacea for all the ills that female flesh is heir to?

The inquirer may obtain a variety of answers to these questions in the report of the discussion of a paper by Fränkel, of Breslau, read before the Gynecological Section of the last Congress of Scientists and Physicians in Berlin. Fränkel found that among more than five thousand gynecological cases eighteen per cent. had backward displacements of the uterus, and about seventy per cent. of this number admitted of mechanical treatment; for which purpose, after the uterus has been replaced, he prefers above all others the Thomas pessary, having with it in about eight per cent. of his cases effected a permanent cure; but the treatment was a tedious one, pessaries being used, on an average, one year, and in one case more than two years. This length of time might easily exhaust a physician's patience, and this explains the eagerness with which Alexander's operation for the radical and rapid cure of retroversion was at first adopted, but Fränkel takes occasion to condemn the operation, and his condemnation was endorsed by the majority of the Society.

In the discussion that followed the paper Küstner also recommended the Thomas pessary, while Martin and Veit expressed a decided preference for the Hodge pessary. Sänger spoke strongly in favor of the prophylactic treatment of uterine displacements. He made it a rule, he said, to examine every patient during the first few weeks after confinement, in order to correct any tendency to a retro-deviation, for, in his opinion, these displacements most frequently occurred during the puerperium. Czerny spoke of having sewed the fundus of a uterus to the abdominal wall at the close of an operation for the removal of diseased tubes and ovaries, and Veit related a similar experience, but said that he had little reason to be satisfied with the position of the uterus a year and a half after the operation.

Frank described an operation that he performed in order to dispense with pessaries altogether. The peritoneum was loosened from the uterus and bladder and passed upward in a fold, and was fastened by catgut stitches, which, at the same time, brought the raw anterior surface of the uterus in contact with the denuded surface of the posterior wall of the bladder. Schwarz, on the other hand, recommended the simplest mechanical contrivances, and used, he said, the ordinary Mayer's ring in connection with injections of astringent solutions, while Martin expressed his belief that all treatment of backward displacements of the uterus was unnecessary, unless the displacement was associated with disagreeable symptoms or sterility.

This wide diversity of opinion indicates how unsatisfactory, after all, are the means at our command

for the treatment of retroversions and flexions of the uterus, but it seems to us that a sound judgment would dictate the exercise of some patience in the application of mechanical means of support, and that operative procedures, often difficult of execution and unsatisfactory, even sometimes dangerous in results, will not find a permanent place among the remedies for this condition.

OSTEOPLASTIC RESECTION OF THE FOOT.

IN THE MEDICAL NEWS for January 29, 1887, we called attention to the operation of resection of the foot and leg, known by the names of Wladimiroff and Mikulicz. One such operation has recently been performed in this country, by FENGER, of Chicago, and is reported in *The Journal of the American Medical Association* for January 29, 1887. Another, as yet unreported, was performed a few weeks ago by HOPKINS, of Philadelphia.

The operation of Hopkins was done for an ulcer involving the entire heel and more. Six months before, a car-wheel had carried away all the tissues down to the bone, leaving an isthmus of skin, an inch and a half wide, on the dorsum of the foot. The operation was modified, according to the suggestion made in our editorial of January 27, by suturing the tendo Achillis to the tissues of the foot, Hopkins choosing for this purpose, the plantar fascia, instead of the periosteum of the scaphoid and cuboid bones. He also sutured the retrenched tendon of the peroneus longus muscle, and the posterior tibial nerve, and pegged the tarsus of the leg bone with sterilized bone dowels. So far, the patient has done very well.

In connection with these two operations we would call attention to an interesting enlargement of the scope of this method, as illustrated by a case reported by GUTSCH, in the *Archiv für klinische Chirurgie*, Bd. xxxiv. Heft 3. The patient, a boy twelve years old, had previously undergone a resection by the method of König, but had had a recurrence of tuberculous degeneration. A month after the former operation Gutsch did another resection by the Wladimiroff-Mikulicz method. The circumstances of the case compelled him to make his incision in the foot pass through the cuboid bone and the three cuneiform bones, while that through the tibia and fibula was situated seven centimetres above the point of the internal malleolus. The result was excellent. The bones consolidated perfectly, and with a properly constructed shoe the patient was able to walk without a cane, and even to indulge in snowball fights with his comrades.

TRUTHFULNESS OF SURGICAL REPORTS.

AN old proverb says that "truth is golden," and this should apply in a special manner to reports of successes and failures in surgical work, for the reason that the prognosis in cases of like character must very largely depend upon what is believed to have been the results under former operations, whether fatal or curative. If we cannot trust the statements of the remarkable successes of well-known operators, we are forced to base our prognosis upon doubtful records.

Exaggerations are certain, sooner or later, to be detected through some want of correspondence with previous statements. Investigators who do not confine their observations to printed records will occasionally trace up a long-believed rumor to its sophistical origin. A few years ago a well-known surgeon visiting this city, stated in the course of conversation that he had twice performed the Cæsarean operation with entire success. Inquiry proved the claim to be groundless, and the medical neighbors of the boaster gave him a low status for veracity. The unwritten records of surgical work contain many such statements, and some have only been set aside many years after they were started.

Fabrications of cases are much less commonly published than orally given. Marvels of history, like that of the Princess of Schwarzenberg, said to have been delivered of a living fœtus some hours after she was burned to death, she being in fact but four months pregnant, are so much beyond belief that few give them any credence in this age. As a rule, we are apt to credit the statements of hospital reports, but even in them we may detect exceptionally some boastful swindle. One was exposed not many years since in a general hospital in the Orient, where the chief was absent from his post for several years. His temporary successor made it appear by his reports that he had removed more than the average number of vesical calculi, and with the best results. But not satisfied with this, the young man deliberately fabricated six cases of ovariotomy, giving the names and ages of the women, with accompanying details. On the return of the chief there was a resumption in the former lower average of lithotomies, and the ovariotomy cases were erased from the hospital record as fabulous.

When a surgical operator makes the impression that the number of his cases and the proportion of his cures are to be received *cum grano salis*, he will soon find his statements discredited when perfectly true, because of the bad name which he has acquired for himself in the past. Men of real merit and large experience, should be content to report only what legitimately belongs to them.

PREGNANCY AND ITS SYNONYMS.

IT certainly is remarkable that the terms used synonymously with pregnancy, as a rule, merely express some one of the more obvious phenomena,

and not the essential condition. Thus, the Romans, though they had the word *prægnatio*, spoke of *graviditas*, the increased weight being the origin of the term applied to pregnancy; in like manner, the Italians use the word *gravidanza*. The French express not greater weight, but greater size, in the word *grossesse*. The German *Schwangerschaft* gives the idea of carrying, an idea which has evidently come from the *gestatio* of the Romans, the κύησις of the Greeks, the root of the former being *gesto*, and of the latter κύεω, each meaning to carry. "To be with child," is an English expression which evidently corresponds with the Greek ἐν γαστρὶ ἐχούσαις, a circumlocution found in the New Testament.

Turning from these words, so superficial in significance, and indicating merely phenomena, we find that pregnancy in its etymology expresses the essential condition. The derivation of the word clearly signifies reproduction, the root-verb being *gigno*; and this in turn takes us back to the Greek γεννάω, from which we have genesis, genus, generic, genitor, etc. But we must go to the Sanscrit to find the origin of the Greek verb in *zan* or *gan*: this common verb appears in our language in the word beget. There is, therefore, not only a more profound, but a more appropriate meaning in the word pregnancy than in any of its substitutes.

In honor of the Queen's jubilee, Sir Donald Smith, member of the Canadian Parliament, and Sir George Stephen, President of the Canadian Pacific Railway, have offered to give $500,000 each for a new hospital at Montreal, to be named, with the permission of her Majesty, the Royal Victoria Hospital. The city is asked to give a site on Mount Royal, adjoining the estate of the late Sir Hugh Allen. The building is to cost $250,000, which would leave an endowment of $750,000. This, it is estimated, would bring in about half the necessary revenue for the maintenance of the 200 patients for whom accommodation is to be provided. The site asked for is ten acres in extent, and is valued at $40,000.

Sir William Jenner has, for the seventh time, been elected President of the Royal College of Physicians of London.

At the Eightieth Annual Commencement of the University of Maryland, held in March last, the degree of M.D., was conferred on ninety graduates.

The Imperial Institute at Tokio, Japan, is said to be the only college in the world which has a professorship of sanitary engineering. The position is filled by an Englishman.

A correspondent of the London *Lancet* "thinks that if the American railway companies could be induced to grant free passes over their lines to foreign medical men attending the International Medical Congress in September, it would result in largely increasing the attendance, and would be an immense boon to many doctors of limited means, who otherwise would be debarred from visiting America." Unfortunately for this suggestion, the issuing of free passes is strictly prohibited by the Inter-State Commerce Act.

REVIEWS.

Clinical Manual for the Study of Medical Cases. Edited by James Finlayson, Professor and Lecturer on Clinical Medicine in the Glasgow Western Infirmary. Second edition, revised and enlarged. 12mo. pp. 683. Philadelphia: Lea Brothers & Co., 1886.

The profession cannot but welcome the second edition of this very valuable work of Finlayson and his collaborators. The size of the book has been increased and the number of illustrations nearly doubled. The manner in which the subject is treated is a most practical one. Symptoms alone and their diagnostic indications form the basis of discussion, there being no description of any *disease*.

The first chapter, by Gairdner, on the physiognomy of disease is of interest and value. In the portion following, written chiefly by Finlayson himself, we notice particularly the important chapter on case-taking and that on temperature, with illustrative charts, and the articles on vomiting and vomited matter, dropsy and its causes, and on the use of electrical instruments in diagnosis, with diagrams of the motor points.

The parts devoted respectively to the study of the organs of special sense, and to the examination of the urine, deserve especial mention. The former is, we think, one of the most useful features of the book; the latter contains among other things the qualitative and quantitative processes for the analysis of urea and sugar, with the best tests for albumen, besides a series of very satisfactory illustrations of the microscopical appearances of urinary sediment. The last chapter, by Gemmell, on the physical examination of the chest and abdomen, is by no means the least important. Among the numerous illustrations which it contains are a series of sphygmographic tracings of different pulse types and a set of diagrams representing the rhythm of the cardiac murmurs. The text explains clearly and thoroughly the methods of examination and the conclusions to be drawn from the physical signs.

A bibliography of works bearing upon the subject is appended to nearly every chapter, and a good index ends the volume.

SOCIETY PROCEEDINGS.

NEW YORK NEUROLOGICAL SOCIETY.

Stated Meeting, April 5, 1887.

The President, C. L. Dana, M.D., in the Chair.

Dr. W. R. Birdsall and Dr. R. F. Weir presented a

REPORT OF A CASE OF SARCOMA OF THE BRAIN, OCCIPITAL LOBE, CAUSING HEMIANOPSIA, REMOVED BY OPERATION.

(See The Medical News for April 16, page 421.)

DR. GRAEME M. HAMMOND presented the following

REPORT OF A CASE OF CYST OF THE BRAIN, WITH OPERATION.

The patient, a married woman, complained of a severe pain an inch above the right ear, and had left hemiplegia. At the time her symptoms began she was about twenty-nine years of age; she had had four children; during the progress of her disease she had a fifth child. All were strong and well. Her sickness lasted about two years and a half. It commenced by sudden loss of consciousness, and convulsions limited to the left side. The left side of the face became, and remained, paralyzed. About a year later she noticed gradual loss of power in the left arm; things dropped from the hand. At the end of another year the left arm was completely paralyzed. She then noticed increasing weakness in the left leg. When Dr. Hammond first saw her she was able to stand and walk slowly. While the paralysis was extending she had four or five epileptic seizures. Confined to the left side, headache developed about the time the legs became affected, grew more constant, and was described as agonizing.

She denied syphilis. Physical examination showed loss of motion on the left side of the face, tongue, and soft velum; of the left arm, and partial loss of motion in the left leg. There was no disturbance of sensibility of any kind. The reflexes were exaggerated on both sides. Sight, hearing, smell, and taste were normal. Choked disk on both sides was observed at a subsequent examination.

Under treatment, the headache was controlled to a considerable extent. Dr. Hammond's diagnosis was probable cerebral tumor involving the cortical or subcortical substance of the motor centres. An operation was refused. The patient grew worse until the 20th of March, 1887, when her husband asked that the operation be performed. Dr. Spitzka then saw the patient with him, and made two examinations. He coincided in the diagnosis. The operation was performed in the hospital March 30th; Dr. M. Josiah Roberts assisted at the operation, removing the portion of skull by his electro-osteotome. Four buttons were removed by the electro-trephine. These were connected by straight lines made with the circular saw. The diameter of the opening was over two inches. A crucial incision was made through the dura. A hypodermatic needle was introduced in different directions, but no fluid was withdrawn. The dura was closed, a drainage tube was introduced, the skin flaps were sewed up. The patient was put to bed. She lived only twenty-one hours, remaining unconscious after the operation. Prior to the operation she had become completely paralyzed in the left lower limb, she had delusions and hallucinations, she talked incoherently, bedsores developed.

The autopsy showed little hernial protrusion at the wound; the cortical substance here was thin. Incision through the motor region revealed three cysts in a line deep in the white substance. The fluid in the cysts had been only partially examined; it was serum, and contained broken-down brain substance. The cysts were close together, and in a position to affect the face, arm, and leg centres. He could not explain why the syringe failed to bring forth fluid, unless it was that the cysts were too deeply situated or the needle passed between them. He added to the clinical history that the head was drawn to the right side the last three days of life.

DR. E. C. SEGUIN said he was partly responsible for the operation in the case reported by Drs. Birdsall and Wier, but it seemed that the patient would not live more than two or three months without it. He expected to find a large tumor, but was somewhat surprised to see it encapsulated and non-parenchymatous. During the early history of the case the symptoms pointed to destruction of brain tissue. He asked Dr. Hammond whether the sensory or motor symptoms determined the seat of his operation.

DR. HAMMOND replied that the headache corresponded to the centres for the motor symptoms, and the seat of the operation.

DR. SEGUIN added that the seat of the pain would be a very uncertain indication for the seat of the operation. In some cases of cerebellar tumor, for instance, the pain had been mostly frontal.

DR. E. C. SPITZKA, referring to the case reported by Drs. Birdsall and Wier, said that an artery, large enough to cause fatal hemorrhage, entered the gray and white substance of the right occipital lobe. It had been overlooked in many text-books.

DR. ROBERTS explained how the circular saw could be used without injury to the brain, and the operation of the electro-osteotome.

DR. STARR suggested the desirability of an analysis of reported cases of cerebral tumors for the purpose of determining their rapidity of growth and size.

DR. R. L. PARSONS read a paper entitled

NOMENCLATURE IN PSYCHIATRY. MONOMANIA OR OLIGOMANIA, WHICH? PARONOIA, WHAT?

An examination of the reports of fifty-one asylums for the insane, taken at random, showed that of the whole number of patients enumerated, less than two per cent. were classified as cases of monomania, while in twenty-four of these reports the term did not appear. But, however much systematic writers on the subject of insanity deprecated the use of the term monomania, they rarely succeeded. There are manifestations of insanity which are neither melancholia nor dementia, but which differ so much from mania that another designation is required for them, and the objectionable term monomania is the only one generally employed. Dr. Parsons thought a suitable substitute could be found. Paranoia had been used to a considerable extent, but if the meaning of the term monomania is too narrow for the purpose required, that of paranoia is too broad. In conclusion, then, with the assumption that monomania, as defined and explained by certain writers on psychiatry, designates phases of insanity of sufficient importance and well enough differentiated to require a place in the general classification of mental diseases; and with the further assumption that the reasons adduced in this paper are sufficient to justify the substitution of the term oligomania for monomania, it only remains to apply the proper meaning of the latter term to the former, to wit, a form of insanity which, although potentially affecting all the mental faculties and operations, apparently involves only a part, as the intellect, the emotions, or the will, or certain manifestations only of a faculty of the mind; which originates in the intel-

lectual faculties rather than in the feelings; and the manifestations of which are well defined, persistent, dominant, and systematic in character.

CORRESPONDENCE.

THE PAY OF ARMY AND NAVY SURGEONS.

To the Editor of THE MEDICAL NEWS,

SIR: A comparison of the pay of the medical officers of the army and navy, which appears in one of your recent issues, while in the main correct, so far as direct pay is concerned, conveys an altogether false impression of equality of compensation of the two branches of the service. Leaving out of consideration the question of "actual" and "relative" rank, the significance of which no one not in a military service can fully comprehend, it is not at all a matter of doubt that the army medical officer receives, at least, one-third more than his naval *confrère*, if not in actual cash, in its equivalent.

The writer of the above-mentioned comparison fails to make any allusion to the important consideration of "allowances," which, indeed, in the case of naval officers, do not exist, with the one exception of a ration, rated at thirty cents a day, allowed only when at sea. Those of the army officers, however, constitute a large and important item, and relieve them of many of the expenses of bare living, which tax the officers of the navy so heavily. All army officers, including those of the medical department, are allowed quarters at all times, or commutation for them at the rate of twelve dollars per month per room, for from two to five rooms, according to rank (*Army Regulations*, p. 316), and are thus relieved of the burden of rent, that presses so heavily on naval officers, who rarely obtain quarters, and never commutation for them. Of course, the latter are provided with their little shelves on the side of their ships, when they are at sea, but the rent for their families, when they have families, must come out of their own slender purses. When the naval officer is compelled to move under orders, from one station to another, the cost of transportation of all his possessions must be borne by himself; the army officer is allowed from 1000 to 2000 pounds of extra baggage, which is moved for him at the expense of the government. (*Army Regulations*, p. 214.) From the army commissary department, officers of that service can obtain all the necessaries, for themselves and their families, at little above, and, in many cases, below actual cost. (*Army Regulations*, pp. 317, 241.) Coal, for instance, at the uniform rate of three dollars per ton. No such provision is made for naval officers.

On shore duty, and at least half the time of medical officers of the navy is spent on such duty, the pay is reduced, and when on leave or waiting orders, his pay is still further cut down, his expenses continuing the same, while army officers, whatever their duty, receive their pay and allowances, without reduction.

This is not all. Every five years, the pay of army medical officers, of all grades, is increased ten per cent. Passed Assistant Surgeons in the navy, and in that grade from ten to fifteen years are passed, at the present rate of promotion, receive only one increment of pay, at the end of the first five years.

It is true that there are more medical officers in the navy, holding ranks above that of major, than in the army, but of the full surgeons in the navy, only twenty-seven rank above captain—equivalent to lieutenant in the navy—and a further increase in rank does not entitle them to greater compensation, as it does in the army, length of service only brings an increase every five years after the grade of surgeon is reached, for twenty years beyond which no further increment is allowed. With every successive step in rank, the medical officer of the army receives an increase of pay, upon which his longevity pay is based.

These facts are so well understood outside of the services, that, while it is impossible to supply the natural waste of the medical corps of the navy with properly qualified men, no such difficulty exists in the army, the supply always being in excess of the demand.

P. A. SURGEON.

THE MATERNITY HOSPITAL.

To the Editor of the THE MEDICAL NEWS,

SIR: The Board of Governors of the Maternity Hospital have unanimously determined that the vacancy now existing in the visiting obstetrical staff of the hospital should be filled by a competitive examination.

Dr. Edward L. Duer, Dr. Wm. Goodell, and Dr. W. H. Parish have consented to conduct the examination.

Those desiring the position must apply by letter before the 1st of May to Dr. Edward L. Duer, 1704 Arch Street, Chairman of the Committee, and soon after that date the applicant will be notified of the place where, and time when the examination will be held.

Yours, very truly,

J. V. INGHAM, M.D.,
Chairman of Executive Committee.

734 SOUTH TENTH ST., PHILADELPHIA,
April 18, 1887.

NEWS ITEMS.

PARIS.

(*From our Special Correspondent.*)

ACUTE POISONING BY CARBOLIZED COTTON-WOOL.—In a recent clinical lecture at the Hôpital des Enfants Malades, M. SIMON described an interesting case of acute poisoning by carbolized cotton-wool in a girl patient, aged twenty-two months. On the 6th of January M. Simon was called in consultation to examine a little girl, aged twenty-two months, who had the evening before presented a series of nervous accidents (prostration, vomiting, cold extremities). The patient had been affected with submaxillary adenitis, and tincture of iodine had been applied. The tincture being very much concentrated an ulceration of five to six centimetres in length was the result of its application. The family doctor was now called in, and iodoform gauze and carbolized cotton-wool were applied to the ulceration. The first dressing was made on the 3d of February. The next morning the wound presented a much better appearance, but the general state of the patient left much to be desired. The mouth was dry, tears flowed, and there was evident coryza. The child was very excitable and complained of pain in the head. Temperature 101.8° F., pulse frequent. February 5th

the child was taken with vomiting, which medication failed to arrest. The face became pale and the extremities cold, while the temperature rose to 103° F., prostration was extreme, and the urine suppressed. The carbolized cotton-wool was abandoned, the patient recovering entirely from the toxic symptoms at the end of thirty-six hours.

Specimens of the urine passed during the attack and which were as black as ink did not give the characteristic blue color when treated with nitric acid and starch, making it evident that the iodine had played no part in the intoxication. According to M. Simon, the elimination of the urine having been arrested at the first moment, the carbolic acid was accumulated in the nervous centres, and afterward came away, on the suppression of the carbolized dressing, in the black urine characteristic of the poison.

Considering the great susceptibility of children to the toxic action of carbolic acid, M. Simon thinks that this medicament should never be used in children under two years of age.

DIASTASIZED WINE.—It is generally admitted in the present day that vegetable diastase considerably aids digestion, and the assimilation of farinaceous substances. Dr. Coutaret first indicated a practical process for extracting the diastase from sprouting barley.

MM. Gruber and Musculus demonstrated the identity of vegetable diastase with the salivary diastase of the superior animals, and proved that the ferments of this diastase acted in a similar manner upon glycogen and upon starch.

In Dr. Durand's diastasized wine the tonic substances (cinchonium and manganese), though their proportion is but slight, produce a most remarkable therapeutical effect.

Dr. Delmis describes the case of a woman who had suffered from dyspepsia for fifteen years. Obstinate constipation was the principal symptom. The use of this diastasized wine was followed by a sensible amelioration in her condition. Constipation entirely disappeared.

The beneficial effects of Dr. Durand's diastasized wine have been seen in many cases of dyspepsia, gastralgia, persistent vomiting, anæmia, prolonged and trying convalescence. The ordinary dose prescribed is a wineglassful after meals.

THE AMERICAN SURGICAL ASSOCIATION will hold its annual meeting at Washington, on May 11th, 12th, 13th, and 14th. The preliminary programme, just issued, announces the following papers:

Dr. F. S. Dennis, on "The Exploration of the Bladder by the Suprapubic Method."

Dr. John H. Packard, on "Suprapubic Cystotomy for other purposes than the Removal of Calculi."

Dr. A. Vanderveer, "To what extent can we classify our cases of Vesical Calculi for operation, with report of cases?"

Dr. J. Collins Warren, on "Resection of the Intestines; with Specimens."

Dr. C. B. Nancrede, on "Should Laparotomy be done for Penetrating Wounds of the Abdomen involving Viscera?"

Dr. T. A. McGraw, on "Laparotomy for Injuries of the Abdominal Viscera."

Dr. C. H. Mastin, on "Hernia; its Treatment, etc."

Dr. J. E. Michael, on "Report of a Case of Ventral Hernia successfully treated by operation; with a suggestion as to the method of operating."

Dr. Samuel W. Gross, on "The Prognosis of Sarcomata of the Breast."

Dr. D. Hayes Agnew, on "The Medico-Legal Aspect of Cranial and Thoracic Wounds (suicidal)."

Dr. L. McLane Tiffany, on "Surgical Diseases of the White and Colored Races compared; preliminary observations."

Dr. B. A. Watson, on "An Experimental Study of the Effects of Puncture of the Heart in cases of Chloroform Narcosis."

Dr. J. Ford Thompson, on "Case of Vaginal Hysterectomy."

Dr. W. F. Westmoreland, on "Fibro-cystic Tumor of the Jaw."

Dr. T. J. Dunott, on "Some Remarks on Hypertrophy of the Tongue, and the History of a Case."

Dr. J. A. Comingor, on "A Case of Varix of the Jugular Vein."

Dr. William A. Byrd, on "Excision of the Ankle-Joint."

Dr. David Prince, on "Wounds; their Aseptic and Antiseptic Management."

Dr. J. Ewing Mears, on "The Study of the Methods of Operation Practised, and of the Results Obtained in the Treatment of Cleft of the Hard and Soft Palate, Illustrated by a Record of Fifty Cases."

THE SOUTH CAROLINA MEDICAL ASSOCIATION held its thirty-seventh annual meeting at Aiken, on the 12th and 13th of April, under the presidency of Dr. Cornelius Kollock, of Cheraw. A number of interesting papers were read, and the Society recommended the establishment of a State Medical Examining Board, the members of which should be appointed by the Governor, from nominees presented by the South Carolina Medical Association.

The following officers were elected for the ensuing year:

President—T. Grange Simons, M.D., of Charleston.

Vice-Presidents—James Evans, M.D., of Florence; Thomas Legare, M.D., of Charleston; and D. S. Pope, M.D., of Columbia.

Secretary—W. P. Porcher, M.D., of Charleston.

Treasurer—H. W. De Saussure, Jr., M.D., of Charleston.

The next meeting will be held at Columbia, on the second Wednesday in April, 1888.

MEDICAL DEPARTMENT OF WESTERN RESERVE UNIVERSITY.—A very elegant and complete new building for the Medical Department of Western Reserve University, in Cleveland, Ohio, has been completed, and was formally dedicated on the evening of March 8, 1887. The entire cost, about $175,000, was the donation of Mr. John L. Woods, a wealthy and liberal citizen of that city.—*Maryland Med. Journal*, April 2, 1887.

MALPRACTICE SUIT FOR SKIN GRAFTING.—A case has been recently decided in Atlanta, Ga., which offers

some points of interest. Dr. Henry Wile, of that city, proposed to a boy of thirteen years old to submit to the removal of some small skin grafts from his arm to be placed upon an extensive ulcerated surface on the head of his cousin, a little girl somewhat younger, whom he accompanied to Dr. Wile's office. The boy readily consented, and minute grafts were excised without causing him any inconvenience. The father of the boy subsequently swore out a warrant against Dr. Wile, charging him with assault and battery. Upon trial Dr. Wile was promptly acquitted.—*Maryland Med. Journal*, April 2, 1887.

Smallpox and Rags.—Two cases of smallpox were lately reported from Huntington, among employés of the Chester Paper Company. An investigation of the circumstances by the Secretary of the State Board of Health, showed that rags were the probable medium of contagion, but whether domestic or foreign rags, it was impossible to determine definitely. A portion of the domestic rags were from New York, where smallpox has been prevalent of late, and the probability seemed to Dr. Abbott to be in favor of these rags as being the medium of contagion.—*Boston Med. and Surg. Journal*, April 14, 1887.

Professor Adam Politzer.—The old pupils and friends of Professor Adam Politzer have arranged to present him with his portrait by an eminent artist of Vienna as a token of appreciation of the great service he has rendered to aural surgery during the twenty-five years he has been teaching in the University of Vienna. The presentation will take place at Easter, at the meeting of the Otological Association, at Vienna.

Efficiency of Filters.—An interesting paper was recently read by Dr. Plagge, of Berlin, on the relative efficiency of the different forms of filters in removing bacteria from water, in the Public Health Section of the German Association of Naturalists and Physicians. The experiments were made with water from the River Spree.

The results from Bischoff's spongy iron method were disappointing, from 18,000 to 24,000 bacteria remaining in the filtrate of water which contained 38,000 per cubic centimetre previous to filtering.

Carbon filters proved entirely inoperative.

Sand filters were found to be utterly worthless.

Filters of compressed cellulose were not satisfactory.

The earthenware filters, on Pasteur's principle, gave, in nearly every instance, a filtrate practically free from germs.

Asbestos filters gave an apparently free filtrate, but germs developed later on.

His experiments point in the desirability of using filtered water soon after it is filtered.—*Sanitary News*, April 9, 1887.

Vitiation of the Atmosphere by Gas and Kerosene Stoves.—Dr. D. F. Lincoln, of Savannah, Ga., writes to the *Boston Medical and Surgical Journal*, of March 31, 1887, as follows upon this subject:

"Occupying, for a part of the day, a small room, containing 1100 cubic feet of air, I introduced a small kerosene stove for warmth. The heat yielded was sufficient to raise the temperature of the room about eighteen degrees, which served my purpose sufficiently well. I had to stand some odor; but otherwise, I did not experience any personal discomfort from the peculiar atmosphere. One evening, however, I saw that the reading-lamp was dim; the flame had shrunk to one-half its usual size; thinking that the housekeeper had neglected it, I carried it into the entry, but was surprised to find it burning brightly. Placed in the room, it again burnt low; opening the window relieved the difficulty. The same thing occurred on another evening, when, having with me Wolpert's air-testing apparatus, I found that the amount of carbonic acid in the air had reached sixty-seven parts per ten thousand, the normal amount being three or four parts.

"This numerical statement is only a fair approximation to the truth; but may be regarded as near enough to be of practical importance. It is not at all surprising that such an effect is produced by a pair of burners, each four inches long, generating as much CO_2 as eight or ten common lamps. In a well-built house with tight doors the effect might be doubled."

Schedule of Study Advised in the Berlin University.—The Faculty of Medicine in Berlin has issued a schedule of studies for its students, in which the latter are strongly advised to follow courses in meteorology, mineralogy, geology, anthropology, psychology, and logic. The plan, of course, is not obligatory; but while the Faculty uses no compulsion upon its students in this matter, it holds itself competent to give them good advice.

Prizes for Essays Regarding the Effects of the Use of Tobacco.—The French Society for the Suppression of the Abuse of Tobacco, offers the following prizes, competition for which will remain open until 1888:

A prize of 600 francs for the best essay upon the cachexia caused by nicotine; its symptoms, cause, effects, proven by at least eight clinical observations made in either hospital, private, or military practice.

A prize of 1000 francs upon the effects of tobacco upon men of letters, and its influence upon the development of French literature.

A prize of books worth 200 francs and a medal are offered to any medical man for the best description of four typical cases of affections exclusively attributable to the abuse of tobacco. Communications may be in French, German, English, Italian, or Spanish.

Education of Women in Germany.—Of late the Prussian Minister of Education has had several applications made to him to admit women as students at the universities. His reply is, that women are not to be admitted as regular students at any Prussian university, nor at any of the medical schools.—*Nature*, March 18, 1887.

Acuteness of the Sense of Smell.—Messrs. Nicholls and Bailey recently contributed to *Nature* the results of a series of observations made by them to test the acuteness of smell in the different sexes and in different individuals. The sense of smell in the male was found to be more acute, on the average, than in the female sex. In some individuals it was so keen as to detect one part of prussic acid in two million parts of water. Several

substances were experimented with, and the following is a summary of the results, the figures indicating the average limit of delicacy of perception: Cloves: males, 1 in 88,128; females, 1 in 50,667. Nitrate of amyl: males, 1 in 783,370; females, 1 in 311,330. Extract of garlic: males, 1 in 57,927; females, 1 in 43,900. Bromine: males, 1 in 49,254; females, 1 in 16,244. Prussic acid: males, 1 in 112,000; females, 1 in 18,000.—*Science*, March 25, 1887.

THE TENNESSEE STATE MEDICAL SOCIETY held its 54th Annual Meeting at Nashville on the 13th, 14th, and 15th inst. The following officers were elected for the ensuing year:

President.—P. D. Sims, M.D., of Chattanooga.

Vice-Presidents.—Drs. J. M. Masters, of Knoxville; T. J. Happel, of Newton; and Richard Douglas, of Nashville.

Secretary.—Ambrose Morrison, M.D., of Nashville.

Treasurer.—Richard Cheatham, M.D., of Nashville.

FATALITY OF THE SWORD AS A WEAPON.—Lord Lytton need not have restricted his celebrated aphorism regarding the comparative might of the pen and the sword as he did. Even outside "the rule of men entirely great," the sword has become, in these latter days, quite a feeble and useless thing. Colonel Paul Methuen stated recently, in the course of an address which he gave at Toynbe Hall, in London, that in the Franco-German war, only six Germans owed their death to the sword, and that the total number wounded with this weapon, with which the Romans conquered the world, was only two hundred and twelve. But all this is saying nothing about the rifle, the revolver, or even the toy-pistol. The average boy finds the latter weapon more effective, and infinitely easier to wield, than the pen; while the daily records of the press show that a considerable portion of the community put their trust, in times of storm and stress, upon the seven-shooter, rather than upon the stylographic pen.—*Boston Med. and Surg. Journal*, April 14, 1887.

OBITUARY RECORD.—Died, at Chicago, on April 18th, JAMES STEWART JEWELL, M.D., a distinguished writer on nervous and mental diseases. Dr. Jewell had been in poor health for a considerable time, and although not so ill as to be compelled to relinquish his practice entirely, his condition was such as to cause grave apprehensions among his friends. He began to break down in health about five years ago, and a complication of disorders set in which he was never able to overcome. Dr. Jewell was born Sept. 8, 1837, at Galena, Ill. He was graduated at the Chicago Medical College in 1860, and two years later he settled in Chicago, where he remained in active practice till the time of his death. From 1864 to 1869 he was Professor of Anatomy in the Chicago college, and since 1872 has held the chair of Nervous and Mental Diseases. In 1874 he started the *Journal of Nervous and Mental Diseases*, the columns of which were devoted to the discussion of these disorders.

———At Providence, on April 17, EDWARD T. CASWELL, M.D., in the fifty-fourth year of his age. Dr. Caswell was the son of the Rev. Alexis Caswell, D.D. formerly President of Brown University. He received a liberal education at the Brown University, and was graduated in medicine at the Jefferson Medical College, Philadelphia, in 1859. After a few years of study in Europe, he settled in practice at Providence, where he soon won a high professional position. He made a number of valuable contributions to medical literature, and in 1866 translated Semeleder on *Laryngoscopy and Rhinoscopy*. He was Surgeon to the Rhode Island Hospital, and from time to time has occupied many positions of professional honor.

NOTES AND QUERIES.

CASTRATION OF CRIMINALS.

To the Editor of THE MEDICAL NEWS,

SIR: In THE MEDICAL NEWS of March 26, page 363, I read with interest the News Item "Castration of Criminals." It is an epitome of a paper which I read before the Maine Medical Association, June 11, 1878—"The Eradication of Syphilis and Crime by the Extirpation, in that class, of the Procreative Power." The paper was widely commented upon at that time, and I supposed the suggestions entirely new. I subsequently learned that an article of similar import had appeared in *The Medical Times and Gazette* of May 25, 1872, in which corresponding "proposals" were cited as far back as 1731. So the idea is ripening, and I have no doubt that in future crime will meet, in this form, its most powerful suppressor. This method of treating criminals would not only exert an incalculable moral influence, but eradicate much of that incurable disease which, under the present system, is propagated and transmitted.

Yours, most respectfully,
GEORGE F. FRENCH.

MINNEAPOLIS, April 12, 1887.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM APRIL 12 TO APRIL 18, 1887.

RICHARD, CHAS., *Captain and Assistant Surgeon.*—Granted two months leave of absence on surgeon's certificate of disability.—*S. O. 82, A. G. O.*, April 9, 1887.

KANE, JOHN J., *Captain and Assistant Surgeon.*—Resigned April 13, 1887.—*S. O. 85, A. G. O.*, April 13, 1887.

FREEMAN, V. WALKER, *First Lieutenant and Assistant Surgeon.*—Ordered from Fort McIntosh, Texas, to Post of San Antonio, Texas.—*S. O. 45, Department of Texas*, April 11, 1887.

APPOINTMENTS.

WOODRUFF, CHARLES E.—To be Assistant Surgeon with the rank of First Lieutenant, to date from April 14, 1887.

CABELL, JULIAN M.—To be Assistant Surgeon with the rank of First Lieutenant, to date from April 14, 1887.

THE ARMY MEDICAL BOARD, New York City, New York, is dissolved.—*S. O. 82, A. G. O.*, April 9, 1887.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY FOR THE WEEK ENDING APRIL 16, 1887.

GRIFFITHS, S. H., *Passed Assistant Surgeon.*—Detached from the U. S. S. "Lancaster," and waiting orders.

HIBBETT, C. T., *Passed Assistant Surgeon.*—Detached from duty on Iron Clads, City Point, Va., and waiting orders.

MARSTELLER, E. H., *Passed Assistant Surgeon.*—Ordered to duty on Iron Clads, City Point, Va., the 20th instant.

THE MEDICAL NEWS will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS should be addressed to No. 1004 Walnut Street, Philadelphia.